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REPORT OF SANITARY DEPARTMENT.

REPORT OF VETERINARY DEPARTMENT.

SUMMARY OF STATISTICS

For the Years 1925, 1926, 1927, 1928 and 1929.

	1925	1926	1927	1928	1929
Population Estimated to middle of year	421,968	424,025	425,147	428,454	427,538
Area of City—Acres	32,526	32,526	32,526	32,526	32,526
Density of Population—Persons per acre	13·0	13·0	13·0	13·2	13·1
Houses Inhabited	102,431	103,222	104,488	106,325	107,704
Marriages Registered	4,065	3,823	3,861	3,760	3,955
Birth-rate	19·6	19·6	19·0	18·6	18·4
Do. (Corrected for Country Births)	18·6	18·7	17·9	17·3	17·1
Death-rate (Corrected for Country Deaths)	14·5	13·5	14·3	13·7	15·1
Infantile Mortality	96	80	80	75	80
Cancer Death-rate	1·6	1·5	1·7	1·6	1·8
Phthisis Death-rate	1·0	·8	·9	·8	·8
* Epidemic Diseases Death-rate	1·1	·5	·5	·6	·4

* Includes Enteric Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, and Diarrhœa and Enteritis under 2 years.

Note.—Further detailed statistics for a series of years are shewn in the Tables throughout this Report.

VITAL STATISTICS

AND

REPORTS RELATING TO TUBERCULOSIS, CITY HOSPITAL, CHILD WELFARE, BACTERIOLOGICAL EXAMINATIONS, VENEREAL DISEASES, PORT MEDICAL INSPECTION, SANITARY DEPARTMENT, VETERINARY DEPARTMENT, ETC.

POPULATION.

The official estimate of the population of the City for the year 1929, as calculated by the Registrar-General for Scotland, was 427,538. This represents a decrease of 916, when compared with the population estimated to be resident in the city in the preceding year. The decrease is to some extent accounted for by the decline in the birth-rate, which touched the lowest level since 1918. The movement of population due to emigration and other causes is another factor which must be considered, but no information is available from which definite deductions can be made.

Accepting the Registrar-General's figure as the basis of calculation, the estimated population of the different districts of the City is as follows :—

Area.	Males.	Females.	Total.	Acres.	Persons per Acre.
Edinburgh .	140,558	174,247	314,805	10,877	28·9
Leith . .	39,283	41,382	80,665	1,641	49·2
Suburban .	15,592	16,476	32,068	20,008	1·6
	195,433	232,105	427,538	32,526	13·1

Ward Populations.—The Ward populations have undergone considerable change in recent years. The opening up of new housing areas and the tendency of the citizens to move towards Suburban districts make it difficult to estimate the population of the various Wards with accuracy. The estimates, however, are based upon the number of occupied houses in each Ward, while the residents in Institutions and Military Quarters are shown under separate headings.

The distribution of the population throughout the Wards is given in the table on page 11 and the following statement indicates the principal changes that took place during the year :—

Increases.		Decreases.	
Gorgie	2,873	St. Leonard's . . .	1,850
Newington . . .	886	Canongate . . .	465
Corstorphine and Cramond .	653	St. Giles . . .	453
Portobello . . .	633	South Leith . . .	382
Colinton	92	North Leith . . .	332

HOUSING.

Inhabited Houses.—In the following Table, for which I am indebted to the Burgh Assessor, full particulars are given regarding the number and rental of the occupied houses on the Valuation Roll at Whitsunday 1929. The total number of houses, including those with other premises attached, was 107,704, showing an increase of 1,379 on the corresponding figure for 1928.

NUMBER OF DWELLING-HOUSES OCCUPIED AT WHITSUNDAY 1929.

Ward.		Under £5.	£5 and under £10.	£10 and under £15.	£15 and under £20.	£20 and under £30.	£30 and under £40.	£40 and under £50.	£50 and upwards.	Total in each Ward.
1.	Calton	7	318	1,384	1,366	1,509	544	179	165	5,472
2.	Canongate	61	1,036	1,533	1,106	1,241	292	110	30	5,409
3.	Newington	2	161	368	544	1,323	605	390	1,743	5,136
4.	Morningside	2	39	56	134	1,014	1,801	1,468	1,895	6,409
5.	Merchiston	...	27	260	515	2,120	1,402	447	957	5,728
6.	Gorgie	17	96	1,627	1,555	2,373	361	123	63	6,215
7.	Haymarket	4	149	403	356	1,170	577	217	1,521	4,397
8.	St. Bernard's	7	334	500	425	1,187	1,132	183	856	4,624
9.	Broughton	7	162	565	854	1,115	669	312	274	3,958
10.	St. Stephen's	17	519	790	817	1,030	535	318	577	4,603
11.	St. Andrew's	22	818	652	325	256	105	70	674	2,922
12.	St. Giles	35	1,345	1,575	629	807	151	70	87	4,699
13.	Dalry	1	235	2,024	1,856	1,060	51	9	2	5,238
14.	George Square	22	739	1,119	845	1,281	521	254	255	5,036
15.	St. Leonard's	49	1,533	1,950	893	656	238	117	40	5,476
16.	Portobello	9	257	521	912	2,129	1,018	592	592	6,030
17.	South Leith	2	258	1,425	2,060	2,604	340	177	123	6,989
18.	North Leith	15	869	1,771	992	544	108	36	33	4,368
19.	West Leith	7	588	1,095	592	713	637	364	747	4,743
20.	Central Leith	1	297	1,599	667	515	91	35	16	3,221
21.	Liberton	48	379	790	179	221	178	157	245	2,197
22.	Colinton	18	228	393	167	160	161	144	392	1,663
23.	Corstorphine and Cramond	32	262	262	253	450	806	451	655	3,171
	Total	385	10,649	22,662	18,042	25,478	12,323	6,223	11,942	107,704
Edinburgh Area		262	7,768	15,327	13,132	20,271	10,002	4,859	9,731	81,352
Leith Area		25	2,012	5,890	4,311	4,376	1,176	612	919	19,321
Suburban Area		98	869	1,445	599	831	1,145	752	1,292	7,031

In sixteen Wards, an increased number of houses falls to be recorded. In the remaining seven, decreases took place, the most noteworthy case being that of St. Leonard's, where there was a reduction of 387, due almost entirely to the operation of the first section of the extensive slum clearance scheme in that district.

Below are given the Wards in which the largest increases took place, and they indicate the desire on the part of the citizens to remove to more congenial surroundings in Wards situated on the outskirts of the City :—

Gorgie	771	Portobello	241
Newington	312	Corstorphine and Cramond	215

Housing Schemes.—Through the courtesy of the City Chamberlain, I am able to submit the following particulars regarding the number of houses erected in the Corporation Housing Areas.

The total number of houses provided by the Corporation up to the end of the year was 5,758. Of these, 4,502 were of the three apartment type, 866 of two apartments, 252 of four apartments, and 138 of five apartments.

The following Table shows the distribution of the houses in the respective areas :—

Housing Area.	Houses Completed at 28th Dec. 1929.	Housing Area.	Houses Completed at 28th Dec. 1929.
Abercorn	518	Longstone	48
Bangholm	24	Portobello	34
Corstorphine	40	Prestonfield (Imp. Scheme)	562
Dalkeith Road	18	Restalrig and Hawkhill	646
Dalmeny Street	60	St. Clair Street	66
Davidson's Mains	42	Saughton	499
Gilmerton	28	Sheriff Brae	18
Gorgie	734	Stenhousemills	764
Grassmarket	15	Wardie	494
Heriot Cross	24	Bungalows	141
Lochend (Imp. Scheme)	839	Reconstructions, etc.	144
		Total	5,758

In the accompanying summary the above figures are tabulated to show the number of the different types of houses that have been erected.

	Number of Apartments.								Totals.	
	Two.		Three.		Four.		Five.			
	Number.	Rate per Cent.	Number.	Rate per Cent.	Number.	Rate per Cent.	Number.	Rate per Cent.	Number.	Rate per Cent.
Housing Act, 1919	192	12·3	996	63·9	234	15·0	138	8·8	1,560	27·1
,, ,, 1923	18	100·0	...	...	...	...	...	...	18	·3
,, ,, 1924	318	11·8	2,368	87·6	17	·6	...	...	2,703	46·9
Improvement Schemes	334	22·9	1,126	77·1	...	...	...	...	1,460	25·4
Post-war-Non-State-Aided	4	23·5	12	70·6	1	5·9	...	...	17	·3
Totals	866	15·0	4,502	78·2	252	4·4	138	2·4	5,758	100·0

Slum Clearance Schemes.—During the year under report a further slum clearance scheme, embracing properties in St. Leonard's Ward, was promoted by the Local Authority.

This is known as the St. Leonard's (Second Section) Improvement Scheme, 1929. It is the most extensive that has been undertaken in the City, and represents a substantial advance towards a much-needed improvement in the St. Leonard's and adjoining district. Under the scheme it is proposed to deal with 1,606 houses, and of these, 723 are single-roomed, and 695 are of the two-apartment type. The total population affected by the clearance is 5,569.

The extent of the scheme will be better understood when it is stated that in the four improvement schemes carried out between 1923 and 1927, the total number of houses dealt with was 2,359 and the population 7,048.

A great improvement will be effected in the areas now scheduled and much old and insanitary property will disappear.

The dispossessed tenants will find accommodation in the new housing area at Niddrie Mains, where the housing arrangements and general surroundings offer a striking contrast to the areas included in the improvement scheme.

The following Table shows the number of houses dealt with and the population affected in the various slum clearance schemes undertaken by the Corporation since 1923.

Improvement Scheme Area.	Houses Dealt With.	Population Affected.
Cowgate-Grassmarket, 1923 . .	639	1,429
Leith, 1924	678	2,444
Canongate-Corstorphine, 1927 .	293	556
St. Leonard's (1st Section), 1927 .	758	2,619
St. Leonard's (2nd Section), 1929 .	1,606	5,569
Totals . . .	3,965	12,617

On the opposite page two photographs are submitted to show the contrast between the class of property that is being scheduled for removal in slum clearance areas, and the new houses that are being provided by the Corporation for the dispossessed tenants.

The first is a view of Richmond Place, the greater part of which is included in the recently promoted St. Leonard's Scheme. The property is old and insanitary, and the houses. which are mostly of the one-apartment type, are devoid of the modern requirements of a healthy dwelling. The tenements have been hopelessly subdivided, and in some cases the sink and sanitary accommodation is common to as many as five different households.

Under such conditions it is not surprising that this and similar districts in the vicinity have become veritable breeding places of disease and the cause of much wastage of infant life.

The second photograph shows the alternative accommodation offered in the Prestonfield Housing Area. The contrast between the old and the new housing conditions is strikingly illustrated. The houses at Prestonfield are built on the most approved lines and are fitted with every modern convenience. The majority of the houses are in blocks of four and six, and the lay-out has been planned to ensure that each house will receive the maximum amount of fresh air and sunshine.

A Housing Contrast.

Houses scheduled for Demolition under the St. Leonard's Improvement Scheme.

Houses erected by the Corporation for Dispossessed Tenants.

VITAL STATISTICS.

The accompanying Table gives a general survey of the increase which has taken place in the population of the City since 1861, and also shows the number of births and deaths with the rates per 1,000 of the population. The Infantile Mortality is also given.

It should be noted that the figures throughout the Table have been corrected, where necessary, to remove errors in estimating the population for intercensal years.

Years.	Population.	Deaths.	Rate per 1000.	Births Registered.	Rate per 1000.	Infantile Mortality.
†1861	170,444	3946	23·1	5694	33·4	135
†1871	196,979	5484	27·8	6874	34·8	151
†1881	228,346	4308	18·8	7360	32·2	128
1882	232,602	4292	18·4	7351	31·6	121
*1883	239,910	4275	17·8	6844	28·5	128
1884	242,802	4556	18·7	7481	30·8	135
*1885	245,447	4241	17·2	7372	29·9	120
1886	248,121	4555	18·3	7451	30·0	136
1887	250,824	4824	19·2	7641	30·4	137
1888	253,264	4374	17·2	7500	29·6	128
1889	256,318	4415	17·2	7414	28·9	133
*1890	259,110	4999	19·2	7177	27·6	144
†1891	261,225	5257	20·1	7382	28·2	138
1892	265,573	4746	17·8	7169	26·9	135
1893	269,105	4830	17·9	7434	27·6	148
1894	272,683	4350	15·9	7207	26·4	125
1895	276,309	5246	18·9	7402	26·6	152
1896	279,983	4275	15·2	7610	27·1	122
*1897	297,198	5782	19·4	7990	26·8	164
1898	301,305	5320	17·6	8097	26·8	141
1899	305,468	5396	17·6	8218	26·9	147
*1900	309,688	5396	17·4	8129	26·2	132
†1901	316,921	5633	17·7	7920	24·9	143
*1902	317,880	5113	16·0	7909	24·8	119
1903	318,219	4963	15·5	8112	25·4	117
1904	318,560	4995	15·6	7777	24·4	125
1905	318,777	4799	15·0	7741	24·2	124
1906	319,120	4868	15·2	7649	23·9	112
1907	319,464	4978	15·5	7504	23·4	121
1908	319,809	4690	14·6	7506	23·4	114
1909	320,282	5106	15·9	7410	23·1	113
1910	320,504	4651	14·5	7063	22·0	103
†1911	320,829	4652	14·4	§6507	20·8	115
1912	321,119	4701	14·6	6346	19·7	110
1913	321,645	4630	14·3	6243	19·4	101
1914	325,780	5025	15·4	6466	19·8	110
1915	323,388	5419	16·7	5851	18·1	132
1916	321,993	4812	14·9	5748	17·8	100
1917	320,116	4924	15·3	4913	15·3	123
1918	318,250	5090	16·0	4830	15·1	94
1919	316,390	5583	17·6	5612	17·7	117
1920	314,193	4442	14·2	7774	24·7	89
*†1921	420,264	6048	14·4	9028	21·5	96
1922	422,547	6447	15·3	8772	20·8	91
1923	422,169	5875	13·9	8662	20·5	82
1924	419,291	6312	15·0	8404	20·0	89
1925	421,968	6138	14·5	7843	18·6	96
1926	424,025	5710	13·5	7926	18·7	80
1927	425,147	6066	14·3	7621	17·9	80
1928	428,454	5872	13·7	7420	17·3	75
1929	427,538	6442	15·1	7304	17·1	80

* City boundaries extended. † Census year.

§ The Births from this year onward are corrected for transfer births, *i.e.*, births to parents domiciled outwith the City are excluded, while births occurring to Edinburgh parents beyond the City are included.

MARRIAGES.

The marriages registered in the City during 1929 numbered 3,955, as compared with 3,760 in 1928. The marriage of 7,910 persons is equivalent to a rate of 18·5 per 1,000 of the population.

Of the marriages which took place in the City during 1929, no fewer than 1,102, or 28 per cent. of the total were by declaration before the Sheriff.

The number of marriages registered in each quarter of the year was as follows :—

1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
733	967	1,290	965	3,955

BIRTHS.

There were 7,855 births registered in the City during the year. After correction for outward and inward transfers, this figure was reduced to 7,304, which represents the number of births to Edinburgh residents during the twelve months.

The birth-rate calculated on the corrected figure was equal to 17·1 per 1,000 of the estimated population, and is the lowest rate that has been recorded since 1918.

The following Table shows the number of births allocated to the City in each quarter of the year, after corrections had been made for transfers :—

Quarter.	Total Births.	Legitimate.	Illegitimate.	Percentage of Illegitimate to Total Births.
1st .	1,881	1,748	133	7·1
2nd .	1,902	1,746	156	8·2
3rd .	1,803	1,685	118	6·6
4th .	1,718	1,594	124	7·3
Total .	7,304	6,773	531	7·3

The births are more fully dealt with in the section of this Report relating to the Maternity and Child Welfare Scheme on page 58.

DEATHS AND DEATH-RATES.

The total number of deaths occurring in the City during the year under review was 7,208. Of these 1,002 referred to non-residents, whose deaths were intimated to the Medical Officer of the district in which the homes of the deceased persons were situated.

In course of the year, 236 inward transfers were received relative to the deaths of Edinburgh citizens which had occurred in other parts of Scotland.

After making the necessary adjustments for these outward and inward transfers, the actual number of deaths to be allocated to the City was 6,442. The death-rate per 1,000 of the estimated population, based on this corrected figure, was 15·1, as compared with 13·7 in 1928, and 14·3 in 1927.

The increase in the death-rate is attributable to the epidemic of influenza which visited the City in the early months of the year. During the progress of the outbreak,

there was also a considerable excess in the number of deaths from respiratory diseases, with a high prevalence of pneumonia.

The annual death-rates for the City since the extension of the boundaries in November 1920 are as follows :—

	1921.	1922.	1923.	1924.	1925.	1926.	1927.	1928.	1929.
Death-rates per 1,000 of the population .	14·4	15·3	13·9	15·0	14·5	13·5	14·3	13·7	15·1

The following Table shows the corrections for outward and inward transfer deaths in each quarter of the year. The quarterly death-rates are based on the net number of city deaths.

Quarter.	Total Deaths Registered.	Transferred to other Districts.	Transferred from other Districts.	Net City Deaths.	Death-rates per 1000.
1st .	2,474	289	58	2,243	21·0
2nd .	1,610	234	59	1,435	13·5
3rd .	1,412	232	78	1,258	11·8
4th .	1,712	247	41	1,506	14·1
Total .	7,208	1,002	236	6,442	15·1

In the next Table the deaths are arranged according to the different areas of the City. The death-rates are calculated on the estimated population in each district, and do not include the residents in institutions and military quarters situated in the respective areas.

Area.	Number of Deaths.	Death-rates per 1000.
Edinburgh	4693	15·2
Leith	1143	14·4
Suburban	332	11·4
Institutions . . .	259	....
Military Quarters . . .	15	....
Whole City . . .	6442	15·1

The information in the accompanying Table has been extracted from the Registrar-General's Reports. The particulars permit of a comparison being made between the mortality rates in the eight large centres of population in Scotland during the last five years.

Death-rates per 1,000 of the population :—

Town.	Year.				
	1925.	1926.	1927.	1928.	1929.
Glasgow	14·8	15·1	14·6	14·8	16·5
Edinburgh	14·5	13·5	14·3	13·7	15·1
Dundee	16·7	14·8	16·9	15·1	16·0
Aberdeen	13·8	13·4	13·8	14·0	15·3
Paisley	13·2	14·2	13·1	13·1	15·1
Greenock	14·3	13·7	13·3	15·7	15·6
Motherwell and Wishaw	12·1	11·0	11·2	11·0	11·3
Clydebank	11·4	10·6	10·7	10·8	11·7
Scotland	13·4	13·0	13·5	13·3	14·5

Ward Mortality.—The following Table has been compiled with the object of showing at a glance the principal mortality rates in the various Wards. The number of one-and two-roomed houses in each Ward is also given, together with the density of population.

In regard to the density per acre it has to be pointed out that the rate is based on the complete area of the Ward, and therefore includes ground used for agricultural, industrial, and other purposes.

Ward.	Density of Population per Acre.	Housing.		Death-rate per 1000.			Infantile Mortality.
		1 Room.	2 Rooms.	All Causes.	Phthisis.	Epidemic Diseases.	
Calton	93·2	230	1,838	15·3	1·1	·4	61
Canongate	21·9	527	2,289	14·7	·8	·5	83
Newington	21·0	117	587	16·1	·6	·4	81
Morningside	15·0	17	158	16·6	·2	...	47
Merchiston	29·7	46	751	15·3	·3	·2	67
Gorgie	37·6	79	2,422	11·3	·9	·6	56
Haymarket	17·1	159	503	13·4	·5	·3	38
St. Bernard's	14·2	160	813	11·9	·4	·3	81
Broughton	31·1	171	1,109	12·5	·8	·1	73
St. Stephen's	86·7	437	911	17·2	1·3	·2	98
St. Andrew's	51·2	722	751	15·6	1·4	·6	121
St. Giles	70·8	1,126	1,687	19·5	1·5	·6	82
Dalry	111·2	227	3,191	14·7	·9	·2	88
George Square	81·5	622	1,575	17·8	1·0	·6	65
St. Leonard's	193·4	1,070	2,280	17·9	1·5	·6	93
Portobello	11·6	111	1,161	13·7	·7	·2	94
South Leith	35·0	166	2,816	13·0	·5	·3	90
North Leith	88·6	528	2,070	17·0	1·4	·6	92
West Leith	39·4	272	1,543	13·6	·4	·2	73
Central Leith	96·6	189	1,765	14·5	1·2	·5	98
Liberton	1·6	143	996	10·2	·6	·3	73
Colinton	1·2	68	588	10·3	·4	...	48
Corstorphine and Cramond	1·5	46	494	13·1	·6	...	35
Total—Extended Area	13·1	7,233	32,298	15·1	·8	·4	80
Edinburgh Area	28·9	5,821	22,026	15·2	·9	·4	78
Leith Area	49·2	1,155	8,194	14·4	·8	·4	89
Suburban Area	1·6	257	2,078	11·4	·6	·1	54

In the Edinburgh Area the highest general death-rates were those recorded for the central Wards, namely, St. Giles, St. Leonard's and George Square. As already indicated, slum clearance schemes have been promoted in these Wards but it is too early to expect any material improvement in the unfavourable mortality statistics which have been returned for these districts over a long series of years.

In St. Giles Ward the general death-rate was equivalent to 19·5 per 1,000 of the estimated population, as compared with a rate of 15·1 per 1,000 for the whole City. The pulmonary tuberculosis death-rate was 1·5, while the diseases comprising the epidemic group accounted for ·6 per 1,000.

The Infantile Mortality for the Ward equalled 82 deaths per 1,000 births, as compared with a rate of 111 recorded in 1928. The rate for the whole City was 80.

The general death-rate for St. Leonard's Ward was 17·9, while for pulmonary tuberculosis and epidemic diseases rates of 1·5 and ·6 respectively were recorded. The Infantile Mortality was 93 or 5 per 1,000 births more than that of the previous year. The average rate of Infantile Mortality for this Ward for the five years preceding 1928 was 107.

George Square Ward returned a general death-rate of 17·8 per 1,000. The pulmonary tuberculosis mortality in this Ward was equal to 1·0 per 1,000 of the population and

the epidemic diseases rate to ·6. The Infantile death-rate for the Ward was 65 as compared with 81 in 1928.

The St. Andrew's Ward returned the satisfactory general death-rate of 15·6. The pulmonary tuberculosis death-rate of 1·4, however, was ·6 per 1,000 higher than that recorded for the whole City, and it is only exceeded by the mortality incidence in St. Giles and St. Leonard's Wards, where the rate for pulmonary tuberculosis was equal to 1·5.

The deaths of infants under the age of one year numbered 25, and 206 births were allocated to the Ward during the year. The Infantile Mortality was therefore at the rate of 121 per 1,000 births, and this represents the highest Ward rate in the City.

St. Andrew's Ward is one of the principal business centres of the City, and in the course of years many of the larger houses have been converted into offices. There are, however, one or two badly overcrowded working-class localities in the Leith Street district and also on the western boundary of the Ward. It is these congested parts with inferior housing conditions and lack of recreation facilities that are primarily responsible for the high incidence of tuberculosis and the excessive Infantile Mortality.

In Canongate Ward the low general death-rate of 14·7 was recorded, while the pulmonary tuberculosis rate was only ·8. The Infantile Mortality rate was 83 per 1,000 births.

The death-rate in Dalry Ward was 14·7, as compared with 12·6 in 1928. The extremely low epidemic diseases death-rate of ·2 was recorded for this Ward, while the mortality from pulmonary tuberculosis was ·9 per 1,000 of the estimated population.

The lowest general death-rates in the Edinburgh Area were those returned for Gorgie Ward, 11·3 ; St. Bernard's, 11·9 ; Broughton, 12·5 ; and Portobello, 13·7.

In the Leith area the highest Ward death-rate was that returned for the North Ward, viz., 17·0. The pulmonary tuberculosis death-rate for the Ward was 1·4, while the epidemic diseases were responsible for a mortality equal to ·6 per 1,000. The Infantile death-rate equalled 92 per 1,000 births, or 8 less than that of the previous year.

In the Central Ward the general death-rate was 14·5 per 1,000, and the pulmonary tuberculosis rate 1·2, as compared with 14·0 and 1·4 respectively in 1928. The Infantile Mortality rate was 98.

The West and South Wards showed death-rates of 13·6 and 13·0 respectively, while the mortality from pulmonary tuberculosis and epidemic diseases was below the average recorded for the whole City.

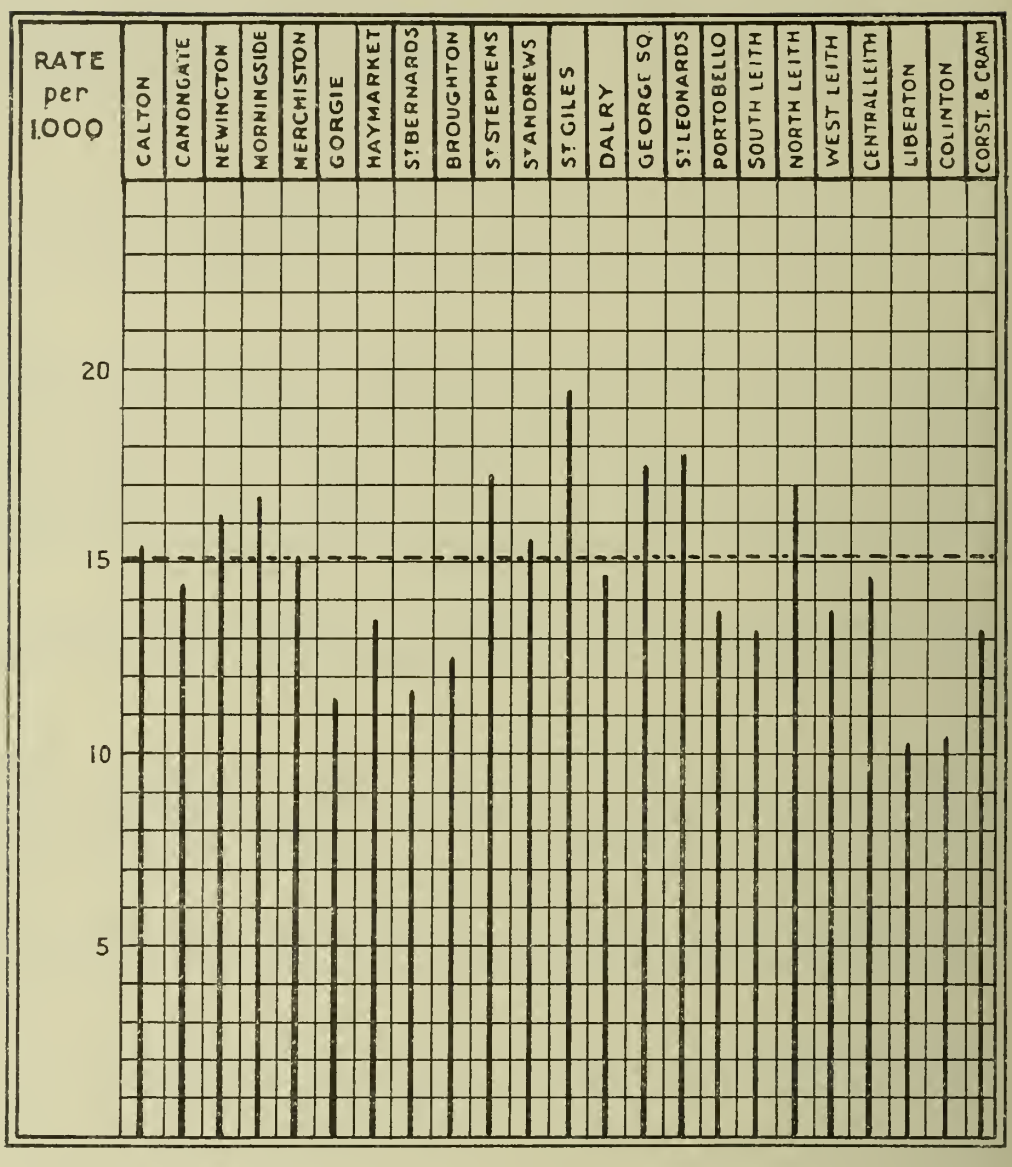
The mortality statistics relative to the three Wards comprising the Suburban area are extremely satisfactory. The death-rate for Liberton Ward was 10·2 ; Colinton Ward 10·3, and Corstorphine and Cramond Ward 13·1.

Only three deaths of an epidemic nature occurred in this area during the year—2 from whooping cough and 1 from diarrhœa of childhood. The death-rate of ·6 per 1,000 for pulmonary tuberculosis was below the average for the City.

The diagram overleaf shows the death-rate from all causes in each of the twenty-three municipal Wards. On page 11 a Table will be found giving detailed statistics for the various Wards.

DEATH-RATE—ALL CAUSES.

PER 1000 OF POPULATION.



---------- Death Rate for City

Table showing the Population, etc., also the Births and Deaths in each Ward during the year.

Ward.	Estimated Population.	Area in Acres.	Density of Population per Acre.	Births.		Infantile Mortality.		Deaths.							
								Pulmonary Phthisis.		* Epidemic Diseases.		Other Causes.		All Causes.	
				Number.	Rate per 1000.	Deaths.	Rate per 1000 Births.	Number.	Rate per 1000.	Number.	Rate per 1000.	Number.	Rate per 1000.	Number.	Rate per 1000.
Calton . .	21,254	228	93·2	327	15·3	20	61	24	1·1	9	·4	295	13·8	328	15·3
Canongate . .	21,115	965	21·9	435	20·6	36	83	16	·8	11	·5	284	13·4	311	14·7
Newington . .	18,695	891	21·0	210	11·2	17	81	12	·6	8	·4	282	15·1	302	16·1
Morningside .	20,489	1,358	15·0	148	7·2	7	47	5	·2	...	...	337	16·4	342	16·6
Merchiston . .	20,118	677	29·7	194	9·6	13	67	6	·3	4	·2	298	14·8	308	15·3
Gorgie . .	25,399	676	37·6	468	18·4	26	56	23	·9	14	·6	251	9·8	288	11·3
Haymarket . .	16,402	959	17·1	209	12·7	8	38	9	·5	5	·3	206	12·6	220	13·4
St. Bernard's .	17,726	1,250	14·2	236	13·3	19	81	8	·4	5	·3	199	11·2	212	11·9
Broughton . .	14,688	472	31·1	261	17·7	19	73	11	·8	2	·1	171	11·6	184	12·5
St. Stephen's .	16,488	190	86·7	254	15·4	25	98	22	1·3	3	·2	259	15·7	284	17·2
St. Andrew's .	10,556	206	51·2	206	19·5	25	121	15	1·4	6	·6	144	13·6	165	15·6
St. Giles . .	18,829	266	70·8	461	24·5	38	82	29	1·5	12	·6	328	17·4	369	19·5
Dalry . . .	20,801	187	111·2	373	17·9	33	88	18	·9	5	·2	284	13·6	307	14·7
George Square .	20,205	248	81·5	370	18·3	24	65	21	1·0	12	·6	328	16·2	361	17·8
St. Leonard's .	20,114	104	193·4	463	23·0	43	93	31	1·5	13	·6	318	15·8	362	17·9
Portobello . .	25,436	2,200	11·6	470	18·5	44	94	18	·7	5	·2	327	12·8	350	13·7
South Leith .	28,675	819	35·0	521	18·2	47	90	16	·5	8	·3	351	12·2	375	13·0
North Leith .	18,784	218	88·6	468	24·9	43	92	26	1·4	11	·6	283	15·0	320	17·0
West Leith . .	18,200	462	39·4	331	18·2	24	73	8	·4	4	·2	237	13·0	249	13·6
Central Leith .	13,713	142	96·6	306	22·3	30	98	17	1·2	7	·5	175	12·8	199	14·5
Liberton . .	10,337	6,339	1·6	164	15·8	12	73	6	·6	3	·3	96	9·3	105	10·2
Colinton . .	6,746	5,602	1·2	83	12·3	4	48	3	·4	...	...	67	9·9	70	10·3
Corstorphine and Cramond . .	11,988	8,067	1·5	143	11·9	5	35	7	·6	...	...	150	12·5	157	13·1
Institutions . .	8,480	...	...	146	...	18	...	11	...	3	...	245	...	259	...
Military Quarters .	2,300	...	...	57	...	1	...	...	...	...	...	15	...	15	...
Totals .	427,538	32,526	13·1	7,304	17·1	581	80	362	·8	150	·4	5,930	13·9	6,442	15·1

* Includes Enteric Fever, Measles, Scarlet Fever, Whooping Cough, Diphtheria, and Diarrhœa and Enteritis under 2 years.

NOTE.—The Ward populations have been adjusted by deducting the population resident in the principal institutions and military quarters. Births and deaths occurring in institutions are allocated to Wards, except in cases where a permanent domicile cannot be established.

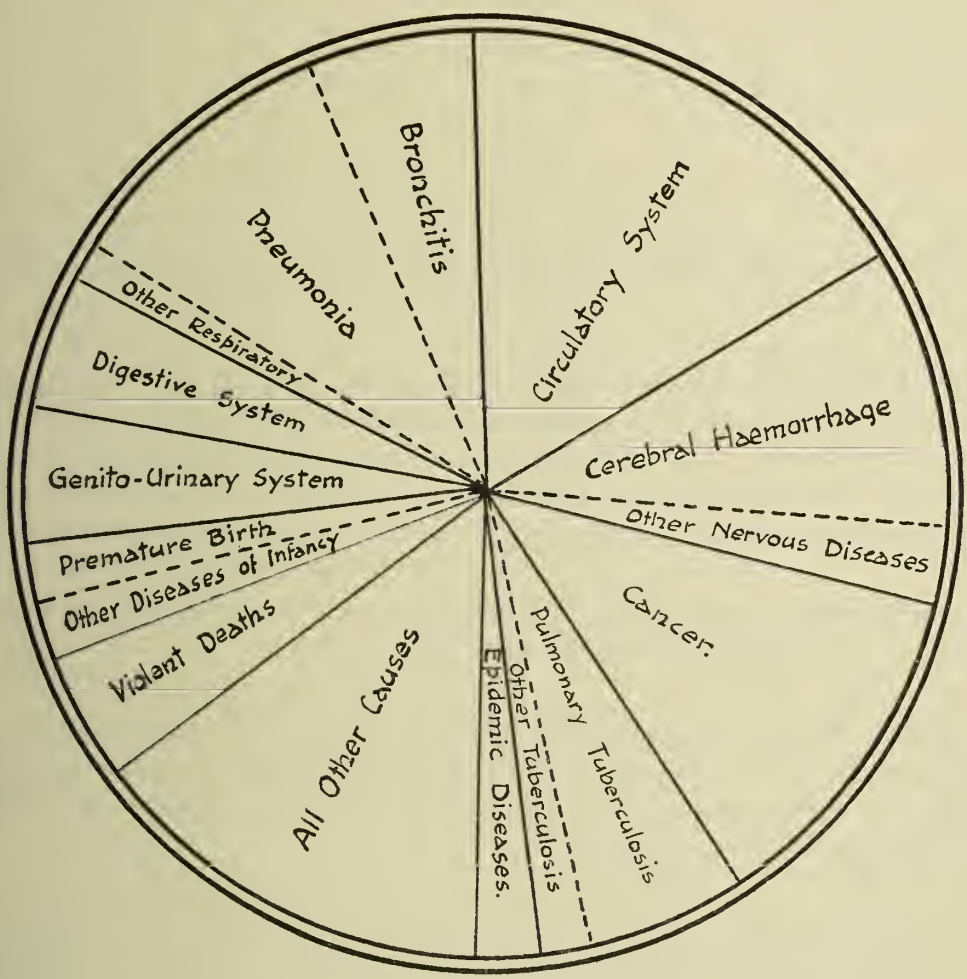
TABLE showing the number of Deaths (including Deaths transferred from other districts) and the Death-rates per 1000 of the Population during 1929 from all causes and from certain specified causes; also the Population, the number of Deaths and the Death-rates per 1000, at all ages and certain age-periods.

	Annual Death-rate per 1000	All Ages	Under 1 Year	1 and under 5 Years	Total under 5 Years	5 and under 10 Years	10 and under 15 Years	15 and under 25 Years	25 and under 35 Years	35 and under 45 Years	45 and under 55 Years	55 and under 65 Years	65 and under 75 Years	75 Years and upwards	Total above 5 Years
Age Distribution of Population	...	427,538	6,795	26,264	33,059	35,960	39,613	80,533	65,149	59,979	52,121	34,578	19,183	7,363	394,479
Deaths from all Causes	...	6,442	581	287	868	79	48	218	284	380	702	1,046	1,367	1,450	5,574
Annual Death-rate per 1000	...	15·1	85·5	10·9	26·3	2·2	1·2	2·7	4·4	6·3	13·5	30·3	71·3	196·9	14·1
Enteric Fever	·00	2	...	...	...	...	...	...	...	1	1	...	...	...	2
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	·01	3	...	3	3	...	...	...	...	...	...	...	...	...	...
Whooping Cough	·09	39	17	21	38	1	...	...	...	...	...	...	...	...	1
Diphtheria and Croup	·13	56	3	35	38	16	1	...	...	...	1	...	...	...	18
Influenza (Sole Cause)	·06	27	1	1	2	...	...	...	...	1	...	3	4	17	25
Erysipelas	·04	19	2	...	2	...	...	...	1	...	2	7	2	5	17
Encephalitis Lethargica	·03	13	...	...	...	...	1	3	1	2	3	1	2	...	13
Cerebro-Spinal Meningitis	·09	40	17	14	31	4	...	2	...	1	1	1	...	...	9
Tuberculosis of Respiratory System	·84	362	3	3	6	4	9	77	80	69	56	42	11	8	356
Tuberculous Meningitis	·11	49	3	19	22	9	4	7	4	2	1	...	...	...	27
Tuberculosis of Intestines and Peritoneum	·06	26	3	3	6	3	4	4	4	...	1	3	1	...	20
Other Tuberculous Disease	·09	37	...	6	6	2	1	13	3	3	3	4	2	...	31
Malignant Disease	1·77	759	...	...	...	...	...	3	18	36	140	215	210	137	759
Rheumatic Fever	·05	22	...	...	...	3	7	3	2	3	...	3	1	...	22
Meningitis	·05	22	5	7	12	...	1	1	1	1	1	1	4	...	10
Cerebral Hæmorrhage, Apoplexy, Hemiplegia	1·50	641	...	...	...	...	...	2	3	11	39	119	232	235	641
Other Nervous Diseases	·36	152	25	6	31	2	...	6	6	10	23	29	27	18	121
Heart Disease	2·20	942	1	1	2	2	3	7	20	42	87	191	305	283	940
Other Diseases of Circulatory System	·32	135	5	2	7	...	...	...	2	3	10	28	39	46	128
Bronchitis	·88	375	22	10	32	1	2	2	6	5	25	48	109	145	343
Pneumonia (all forms)	1·50	640	111	103	214	2	3	20	20	46	58	79	102	96	426
Other Diseases of Respiratory System	·18	77	2	2	4	...	...	3	4	8	7	13	15	23	73
Diarrhœa and Enteritis	·15	66	47	7	54	2	1	1	...	...	...	3	1	4	12
Appendicitis	·06	27	...	1	1	2	...	2	3	2	5	5	6	1	26
Diseases of Liver (non-Malignant)	·12	50	...	...	...	...	...	1	2	4	12	13	11	7	50
Other Diseases of Digestive System	·49	210	14	7	21	4	2	8	7	20	51	37	42	18	189
Nephritis—Acute and Chronic	·52	221	...	2	2	1	1	6	10	16	49	58	45	33	219
Other Genito-Urinary Diseases	·21	89	5	...	5	...	...	2	3	8	12	13	24	22	84
Puerperal Sepsis	·04	18	...	...	...	...	...	3	9	6	...	...	...	...	18
Other Diseases and Accidents of Childbirth	·08	32	...	...	...	...	...	7	18	7	...	...	...	...	32
Diseases of Early Infancy and Malformations	·62	263	262	1	263	...	...	...	...	...	...	...	...	...	...
Violent Deaths	·65	281	7	14	21	17	3	19	26	33	42	42	36	42	260
All Other Causes	1·62	747	26	19	45	4	5	16	31	40	72	88	136	310	702

CAUSES OF DEATH.

On the preceding page there appears a Table showing the deaths tabulated according to the principal age periods and disease groups.

The relative fatality of some of these groups of diseases to the total deaths is shown in the following diagram :—



Epidemic Diseases.—This group includes enteric fever, measles, scarlet fever, whooping cough, diphtheria, and diarrhœa and enteritis in children under the age of two years.

The total number of deaths from this group of diseases was 150, as compared with 242 in 1928 and 219 in 1927. The death-rate for the diseases taken collectively was equal to ·4 per 1,000 of the estimated population.

During the year diphtheria caused 56 deaths and whooping cough 39, while the diarrhœas of childhood accounted for 50. Only 3 deaths were certified as due to scarlet fever, and this is the lowest figure that has ever been recorded in the City for this disease. There were only two deaths from enteric fever during the year, one of which was certified as paratyphoid.

A striking feature in connection with the epidemic group of diseases is that not a single death from measles occurred in the City during the year, the last death from the disease having been registered in July 1928. This experience is unique in the vital statistics of the City. The record is all the more gratifying when it is explained that 338 " first cases " of measles were reported to the Department during 1929.

The following statement shows the number of deaths from epidemic diseases during the last five years :—

	1925.	1926.	1927.	1928.	1929.
Enteric Fever . . .	1	6	3	3	2
Measles	85	42	71	77	...
Scarlet Fever . . .	62	36	17	8	3
Whooping Cough . . .	188	17	43	80	39
Diphtheria	84	43	43	30	56
Diarrhœa and Enteritis . .	76	50	42	44	50
	496	194	219	242	150

Further detailed information regarding the notification of the diseases enumerated in this group will be found under the heading " Infectious Diseases," on page 17.

Tuberculosis.—The deaths certified during the year as due to tuberculosis numbered 474. Respiratory tuberculosis accounted for 362, and the non-pulmonary forms caused 112 deaths. The death-rate from all forms of the disease was 1·1 per 1,000 persons living. The mortality from respiratory tuberculosis taken separately was equal to a rate of ·8 per 1,000.

The notifications and deaths from this disease are fully dealt with by the Tuberculosis Officer in his report on page 25.

Influenza.—Influenza was present in the City in epidemic form during the months of January and February. The first indication that the disease was prevalent appeared towards the end of January, when a considerable increase in the number of notifications of influenzal pneumonia was noticed.

The outbreak continued over a period of seven weeks, and during its course an excessive mortality from diseases of a respiratory nature was recorded. The epidemic spread rapidly, and reached its maximum point during the fifth week, after which it gradually subsided.

The following weekly death-rates recorded during the period of the outbreak indicate how suddenly it developed :—

Week ending.	Influenzal Deaths.	Death-rate. All Causes.
19 January . . .	4	17·3
26 ,, . . .	18	20·4
2 February . . .	42	25·7
9 ,, . . .	65	32·9
16 ,, . . .	68	29·2
23 ,, . . .	27	26·4
2 March . . .	21	20·6

In the accompanying Table the total deaths occurring during the year from influenza are tabulated according to age periods and the complication certified as the contributory cause of death.

Cause of Death.	Sex.		Age Periods.											Totals.
	M.	F.	-1	1-	5-	10-	15-	25-	35-	45-	55-	65-	75-	
Influenza—Sole Cause .	7	20	1	1	...	...	...	...	1	...	3	4	17	27
With Pulmonary Tuberculosis	3	2	...	...	...	...	1	1	1	2	...	...	...	5
,, Bronchitis .	14	31	...	...	...	...	...	1	...	5	10	10	19	45
,, Pneumonia .	63	81	7	9	...	...	6	13	19	19	22	25	24	144
,, Other Respiratory Diseases	10	11	...	...	...	...	...	1	1	1	4	5	9	21
,, Childbirth .	...	1	...	...	...	...	1	...	...	...	...	...	...	1
,, All other causes	17	32	2	1	...	...	1	2	3	5	9	16	10	49
Totals . .	114	178	10	11	...	...	9	18	25	32	48	60	79	292

Cancer.—The deaths classified in the malignant group of diseases during the year numbered 759, as compared with 687 in 1928 and 716 in 1927. The mortality among males was equal to a rate of 1·7, and among females 1·8 per 1,000 living.

An analysis of the ages at death indicates that cancer is a disease which is liable to develop after middle age has been reached. During the last five years 3,490 deaths from cancer have been recorded in the City, and of these 91·7 per cent. referred to persons over the age of 45 years.

In the accompanying Table the deaths from malignant disease are classified according to age and sex, and the organ affected :—

Cancer Distribution.

Site.	Sex and Age-Periods.																				Totals.
	Under 15.		15-20.		20-25.		25-35.		35-45.		45-55.		55-60.		60-65.		65-75.		75 and upwards.		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
in	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
, Face, and Ear . .	...	...	...	...	...	...	...	...	...	...	3	...	...	1	3	1	3	1	1	1	14
gue and Mouth . .	...	...	...	...	...	...	...	...	...	...	4	...	6	...	6	...	9	...	4	...	29
ynx, Pharynx, and Neck	...	...	...	...	...	...	...	...	...	...	2	2	5	1	4	...	8	1	3	1	27
rax and Lungs . .	...	...	1	...	...	...	1	1	1	...	6	1	5	...	2	1	4	4	1	1	29
ast	...	...	...	...	...	...	...	1	...	6	...	19	...	11	...	17	...	13	...	12	79
mach and Œsophagus .	...	...	...	...	...	...	2	...	3	4	19	15	18	6	13	9	29	29	9	21	177
er and Gall Bladder .	...	...	...	...	1	...	...	...	1	1	2	3	3	5	3	2	7	8	4	4	44
stines and Rectum .	...	...	...	...	...	...	2	...	5	1	9	13	11	9	9	11	21	23	15	20	149
creas	...	...	...	...	...	...	...	...	...	1	5	1	1	2	3	1	6	2	2	2	26
orus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	3
rus	...	...	...	...	...	...	...	3	...	7	...	13	...	10	...	5	...	7	...	6	51
ries and Vagina .	...	...	...	...	...	...	...	1	...	2	...	4	...	4	...	2	...	1	...	1	15
is and Scrotum .	...	...	...	...	...	...	1	...	1	...	...	...	...	...	1	...	1	...	2	...	6
lomen and Pelvis .	...	...	...	...	...	...	...	1	1	1	3	5	1	1	...	4	2	5	1	6	31
ney	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	...	1	...	4	8
state	...	...	...	...	...	...	...	...	...	...	3	...	...	...	2	...	6	...	4	...	15
dder	...	...	...	...	...	...	...	...	...	...	2	...	2	3	1	1	3	3	1	2	18
es	...	...	...	1	...	...	...	2	...	...	...	1	4	...	...	1	...	1	...	...	10
tless Glands . .	...	...	...	...	...	...	1	...	...	1	2	1	...	...	1	...	2	1	2	1	12
erwise specified . .	...	...	...	...	...	...	1	1	...	...	...	1	...	...	...	...	3	5	2	3	16
M.	...	...	1	...	1	...	8	...	12	...	61	...	57	...	49	...	104	...	51	...	344 } 759
Totals . . . F.	...	...	...	1	...	...	...	10	...	24	...	79	...	53	...	56	...	106	...	86	415 }

The following Table shows the number of cancer deaths occurring annually in Edinburgh since 1898, and the death-rate per 1,000 of the estimated population :—

Year.	Male.	Female.	Total.	Rate per 1000 Living.
1898	104	163	267	·8
1899	112	164	276	·9
1900	116	181	297	·9
1901	110	183	293	·9
1902	127	185	312	·9
1903	130	186	316	·9
1904	125	206	331	1·0
1905	124	220	344	1·0
1906	132	198	330	1·0
1907	120	224	344	1·0
1908	123	230	353	1·1
1909	130	243	373	1·1
1910	167	220	387	1·2
1911	154	251	405	1·2
1912	139	261	400	1·2
1913	146	255	401	1·2
1914	172	277	449	1·4
1915	187	248	435	1·3
1916	190	256	446	1·4
1917	162	257	419	1·3
1918	189	265	454	1·4
1919	158	274	432	1·3
1920	194	277	471	1·4
*1921	246	379	625	1·5
1922	273	384	657	1·5
1923	267	377	644	1·5
1924	290	393	683	1·6
1925	284	391	675	1·6
1926	276	377	653	1·5
1927	309	407	716	1·7
1928	305	382	687	1·6
1929	344	415	759	1·8

* City Boundaries extended to include Leith and Suburban area.

Diseases of the Nervous System.—The deaths classified in this group numbered 815 —355 males and 460 females. Of the total deaths, 417 were certified as due to cerebral hæmorrhage, 132 to cerebral embolism or thrombosis, 75 to hemiplegia, and 17 to apoplexy.

As regards the age incidence, 43 deaths referred to children under the age of five years, and of these 30 were infants under one year. No fewer than 516 deaths occurred in persons over 65. Among the deaths of children 27 were classified as due to convulsions and 12 to meningitis.

Diseases of the Circulatory System.—The number of deaths tabulated under this heading was 1,077, of which 541 were males, and 536 were females. Diseases of the heart accounted for 942 deaths, and of these 278 were attributed to valvular disease, 41 to angina pectoris, 37 to fatty degeneration, and 586 to various other heart conditions. Diseases of the blood vessels were responsible for the remaining 135 deaths in this group, 78 being certified as arterio-sclerosis, and 32 as aneurysm.

Diseases of the Respiratory System.—The deaths from diseases of the respiratory system, exclusive of those associated with influenza, amounted to 1,092. The chief contributing causes in this group were pneumonia and bronchitis, which together accounted for 1,015 of the total deaths.

The following figures show the number of deaths occurring in each quarter of the year. It will be noted that fully 53 per cent. of the total deaths were registered during the first quarter, when influenza was epidemic in the City.

Cause of Death.	1st Quarter,	2nd Quarter.	3rd Quarter.	4th Quarter.	Totals.
Pneumonia (all forms) . . .	319	125	74	122	640
Bronchitis	227	68	26	54	375
Other Respiratory Diseases . .	39	15	8	15	77
Totals . . .	585	208	108	191	1,092

Of the total deaths in the respiratory group 250 were children under five years, the number of those under one year being 135. Pneumonia in its various forms accounted for 640 deaths, of which 111 were infants in their first year, while 103 were between the ages of one and five years.

Diseases of the Digestive System.—The various diseases associated with the digestive organs, exclusive of the diarrhœas of childhood, accounted for 303 deaths. Non-malignant diseases of the liver caused 50 deaths, ulceration of the stomach 41, ulceration of the duodenum 30, and appendicitis 27. The deaths from hernia numbered 37, and those from intestinal obstruction, other than hernia, 30.

Deaths by Violence.—These numbered 281, of which 177 were males and 104 were females. There were 285 violent deaths recorded in 1928, and 249 in 1927.

INFECTIOUS DISEASES.

The various diseases falling to be dealt with under this heading are :—

(1) Diseases which are notified in terms of Section 6 of the Infectious Disease (Notification) Act, 1889.

(2) Diseases which have been added to the list by Orders made by the Department of Health for Scotland under Section 78 of the Public Health (Scotland) Act, 1897.

(3) Measles, whooping cough, and chickenpox, which have been made temporarily notifiable by the Local Authority.

The following Table shows the number of notifications for each month of the year :—

Disease.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria and Membranous Croup .	90	70	66	77	56	61	88	56	97	151	209	150	1,171
Erysipelas	33	45	38	27	26	13	18	26	19	34	26	33	338
Scarlet Fever	71	63	92	61	70	61	85	77	86	139	166	183	1,154
Typhus	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhoid Fever	...	2	8	3	7	26	15	8	4	1	1	1	76
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	16	9	14	5	6	23	9	17	2	11	6	13	131
* Puerperal Pyrexia	...	...	...	...	...	...	...	...	...	13	12	10	35
Cerebro-spinal Fever	4	11	9	8	11	2	2	3	4	3	3	3	63
Infective Jaundice	...	...	...	...	...	1	...	...	...	...	...	...	1
Tuberculosis, Pulmonary . . .	56	44	70	54	65	55	52	46	35	38	31	50	596
Tuberculosis, other forms . . .	26	20	34	35	43	20	29	21	24	22	25	18	317
Ophthalmia Neonatorum . . .	2	...	4	...	3	5	4	1	3	2	3	2	29
Malaria	2	1	...	1	2	1	2	1	...	...	2	1	13
Dysentery	1	...	...	3	...	3	2	...	...	...	2	...	11
Trench Fever	...	...	...	...	...	...	...	...	...	...	...	...	...
Acute Primary Pneumonia . . .	92	102	46	50	54	40	28	33	23	31	33	47	579
Acute Influenzal Pneumonia . .	109	226	21	11	4	2	2	2	1	2	12	4	396
Measles	51	36	50	38	40	44	8	19	16	22	5	9	338
Whooping Cough	69	102	106	92	101	76	96	79	41	36	25	40	863
Poliomyelitis	...	...	...	...	...	...	...	...	3	1	11	3	18
Polio-encephalitis	...	...	...	...	...	...	...	...	...	...	...	...	...
Encephalitis Lethargica . . .	1	...	...	...	2	...	...	3	2	1	2	...	11
Chickenpox	354	296	361	193	148	187	201	88	27	69	110	94	2,128
Totals . .	977	1027	919	658	638	620	641	480	387	576	684	661	8,268

* Notifiable since 1st October.

Enteric Fever.—During the year 76 cases of infection associated with the enteric group were notified, as compared with 19 in 1928 and 78 in 1927. The increased prevalence during the year under report was mainly due to an outbreak of paratyphoid B. infection in the Leith area, and over 30 persons were directly involved.

In connection with this outbreak it was definitely ascertained that four of the cases were infected outside the City or by relatives who had previously suffered from the disease. The remaining affected persons had not been in contact with any known case or "carrier," but it was significant that each consumed milk from the same source.

An inspection of the dairy involved showed that the plant was of the most up-to-date kind, and every precaution was being taken against the possibility of contamination.

The employees at the dairy were interviewed and questioned regarding the state of their health. All appeared to be healthy, and had no past history of enteric, with the exception of one man who had been infected in 1906 while serving with the Army in India. This man was immediately removed from work, and specimens of his blood and fæces were taken for bacteriological examination. These were found to be negative, and the man was allowed to resume his work.

Another employee was found to reside at the same address as one of the infected cases, although in a different house, and he was also removed from work until it was found that his blood and fæces were both negative. On inquiry it was found that the milk was obtained from different farms outwith the City. A list of these was sent to the Medical Officer of Health of the area in which the farms were situated with a request for information regarding a possible source of infection at any of the farms concerned. Replies, however, indicated that there were no known or suspected cases at any of the farms.

In spite of these negative findings, suspicion must still rest on the milk as being the agent through which the infection was disseminated.

The infection was fortunately of a mild type and no death occurred as a result of the outbreak.

Diphtheria.—The number of cases of diphtheria intimated during the year was 1,171, as compared with 629 in 1928.

In no year since the extension of the City boundaries in 1920 has diphtheria been so prevalent as during the year under report. In the early days of October a decided increase in the number of notifications was noticed, and the excessive prevalence continued during the months of November and December.

A peculiar feature in connection with the increased number of cases was that the effect of the disease was chiefly felt in five of the most congested Wards of the City. This was exactly what might be expected from an infection which is so often spread from one individual to another by "carriers." In point of fact the discovery of many "carriers" was a conspicuous feature of the investigations carried out by the Department during the outbreak. Another point of experience was the occurrence of multiple cases in common stairs, and this supports the view that tenements with many houses branching from common passages encourage the spread of infectious diseases.

Generally speaking, the type of the disease was of a mild nature, and only where late diagnosis or delayed admission to hospital occurred did fatal consequences result. The death-rate per cent. of the cases notified equalled 4·7, as compared with 4·8 in 1928 and 7·3 in 1927.

The number of cases notified in each of the last nine years, together with the deaths and case-rates per cent. is given below :—

Year.	Notifications.	Deaths.	Rate per cent.
1921	991	75	7·5
1922	800	57	7·1
1923	770	69	8·9
1924	720	73	10·1
1925	870	82	9·4
1926	552	43	7·8
1927	599	44	7·3
1928	629	30	4·8
1929	1171	55	4·7

Scarlet Fever.—The mortality from scarlet fever shows a steady decline and only three deaths occurred among the 1,154 cases notified to the Department during 1929. The death-rate per cent. of the cases was equal to ·3, and this represents the lowest case mortality from scarlet fever that has been recorded in the City.

The incidence of the disease was greatest in Portobello Ward, 106 cases being reported in the course of the year. This was closely followed by Gorgie Ward, where 101 cases were notified. The central Wards of the City were comparatively free from the infection.

The following Table shows the number of cases notified in each of the last nine years, with the deaths and death-rates per cent. of the cases :—

Year.	Notifications.	Deaths.	Rate per cent.
1921	2163	42	1·9
1922	1702	32	1·8
1923	1897	93	4·9
1924	1761	68	3·8
1925	2351	62	2·6
1926	1852	32	1·7
1927	1848	19	1·0
1928	1046	6	·6
1929	1154	3	·3

Measles.—The City has been practically free from measles during the year under report. Only the first case occurring in a household requires to be notified, and 338 such cases were reported to the Department in 1929, as compared with 4,340 and 2,803 in 1928 and 1927 respectively.

No death from measles was registered during the year, an experience which is unique in the health records of the City.

Whooping Cough.—There were 863 first cases of whooping cough intimated during the year. At no time could it be said that the disease was present in the City in epidemic form. The greatest incidence was experienced during the first quarter of the year, when 277 cases were notified.

The deaths from whooping cough numbered 39, and of these 38 were children under 5 years of age, 17 being infants in their first year. In 1928 whooping cough caused 80 deaths, while 43 deaths were registered in 1927.

Cerebro-Spinal Meningitis.—This disease was more prevalent than in recent years, 63 cases being notified in 1929, as compared with an annual average of 21 cases for the five preceding years. The mortality-rate was equivalent to 76·2 per cent. of the cases notified. The mortality in 1928 was equal to 84·0 per cent.

The age distribution of the cases was as under :—

Under 1 year	24 cases.
1–5 years	27 „
5–15 „	5 „
15–25 „	3 „
25–45 „	2 „
45–65 „	2 „
Total . . .	63 „

Erysipelas.—Notifications were received of 338 cases of erysipelas. During the previous year 283 cases were reported. The deaths number 19, giving a death-rate of 5·6 per cent. of the cases notified.

Puerperal Fever.—The Puerperal Fever and Puerperal Pyrexia Regulations made by the Department of Health for Scotland, came into force on the 1st October 1929. The Regulations prescribed new forms for the notification of "puerperal fever" and also required the notification of "puerperal pyrexia."

During the year 131 cases of puerperal fever were notified to the Department, and 35 cases of puerperal pyrexia have been reported since the introduction of the new Regulations in October. Full particulars regarding the cases will be found in the Maternity and Child Welfare Section of this report on page 70.

Ophthalmia Neonatorum.—Only 29 cases of ophthalmia neonatorum were reported during the year, and these are fully reviewed in the Maternity and Child Welfare Report on page 68, and in the Report on Venereal Diseases on page 73.

Admissions to Hospitals.—The following Table shows the number of patients admitted during the year to the various hospitals under the control of the Department. It should be noted that the figures include patients admitted to the respective hospitals by arrangement with other local authorities.

	Pulmonary Tuberculosis.	Other Tuberculosis.	Other Diseases.	Total.
Colinton Mains Hospital . .	*203	56	3,534	3,793
East Pilton Hospital . . .	†332	....	140	472
Royal Victoria Hospital . .	197	....	....	197
Portobello Hospital . . .	....	....	25	25
Polton Farm Colony . . .	23	....	....	23
Totals .	755	56	3,699	4,510

* Includes 95 cases transferred from Pilton Hospital.

† From 1st January to 17th November.

In the Table on page 21 particulars are given regarding the incidence of the more important infectious diseases in the various Wards of the City, and on page 22 there is a continuous record of the notifications and deaths since 1886.

The relative proportion of certain specified forms of infectious disease treated in hospital since 1890 is shown on page 23.

In the Table on page 24 the notifications of the principal infectious diseases are tabulated according to the size of the house in which the infected persons reside.

No.	Ward.	Smallpox.		Typhus.		Enteric.		Puerperal.		Diphtheria.		Scarlet.		Erysipelas.		Cerebro-Spinal Fever.		Measles.		Whooping Cough.		Total.	
		Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.	Notifications.	Deaths.
1	Calton	...	...	...	...	...	...	7	...	45	3	54	...	15	1	3	2		...		6	124	12
2	Canongate	...	...	...	...	1	1	2	1	94	7	47	...	14	...	3	2		...		...	161	11
3	Newington	...	...	...	...	1	...	3	...	53	4	61	...	9	...	2	2		...		1	129	7
4	Morningside	...	...	...	...	3	...	...	...	26	...	51	...	10	2	...	...		...		...	90	2
5	Merchiston	...	...	...	...	1	...	1	1	22	1	42	...	13	1	4	3		...		2	83	8
6	Gorgie	...	...	...	...	1	...	6	1	74	6	101	...	17	...	...	...		...		4	199	11
7	Haymarket	...	...	...	...	1	...	1	...	24	2	28	1	6	...	...	...		...		1	60	4
8	St. Bernard's	...	...	...	...	...	...	4	...	29	1	43	...	15	...	1	1		...		1	92	3
9	Broughton	...	...	...	...	1	...	3	...	19	...	22	...	12	...	...	...		...		1	57	1
10	St. Stephen's	...	...	...	...	...	...	3	1	33	2	37	...	17	2	1	...		...		...	91	5
11	St. Andrew's	...	...	...	...	4	...	2	1	23	2	15	...	6	2	2	2		...		1	52	8
12	St. Giles	...	...	...	...	3	...	3	1	109	5	33	...	19	...	2	2		...		1	169	9
13	Dalry	...	...	...	...	3	...	6	...	64	...	72	...	22	1	3	3		...		3	170	7
14	George Square	...	...	...	...	2	...	5	1	88	4	56	...	17	4	2	2		...		3	170	14
15	St. Leonard's	...	...	...	...	3	1	9	1	117	3	36	1	20	...	5	5		...		3	190	14
16	Portobello	...	...	...	...	3	...	6	2	43	...	106	...	11	1	8	4		...		1	177	8
17	South Leith	...	...	...	...	14	...	10	2	100	4	85	...	26	...	6	5		...		2	241	13
18	North Leith	...	...	...	...	7	...	6	2	32	5	42	...	14	3	8	6		...		3	109	19
19	West Leith	...	...	...	...	9	...	7	1	27	1	54	1	17	...	2	1		...		1	116	5
20	Central Leith	...	...	...	...	5	...	3	1	19	3	57	...	10	1	1	1		...		2	95	8
21	Liberton	...	...	...	...	...	...	3	...	10	...	26	...	4	...	1	...		...		2	44	2
22	Colinton	...	...	...	...	...	...	1	...	10	...	18	...	5	...	...	...	Only first case in household notifiable.	...	Only first case in household notifiable.	...	34	...
23	Corstorphine and Cramond	...	...	...	...	3	...	2	...	7	...	12	...	6	...	...	...		...		...	30	...
	Military Quarters	...	...	...	...	...	...	...	...	4	...	8	...	...	...	1	1		...		...	13	1
	Institutions	...	...	...	...	11	...	38	4	99	2	48	...	33	1	8	6		...		1	237	14
	Total	...	...	...	...	76	2	131	†20	1,171	55	1,154	3	338	19	63	*48	...	...	...	39	2,933	186
	Case- and Death-rates (per 1000 population) for year	...	...	...	...	·18	·00	·30	·05	2·74	·13	2·70	·01	·79	·04	·15	·11	...	...	...	·09	6·86	·44
	Case- and Death-rates (per 1000 population) for year 1928	...	...	...	...	·04	·00	·18	·06	1·47	·07	2·44	·01	·66	·02	·06	·05	...	·18	...	·19	6 72	·56

The deaths in this Table represent those actually occurring among the cases notified although taking place after 31st December.

† Includes 4 Deaths transferred to other districts, but excludes 1 Death classified under Influenza.

* „ 7 „ „ „ „ „

Table showing the number of Notifications and Deaths, together with Death-rate per cent. of Cases of each Disease, during forty-four years, 1886-1929.

Year.	Smallpox.			Typhus Fever.			Enteric Fever.			Puerperal Fever.			Diphtheria, Membranous Croup.			Scarlet Fever.			Erysipelas.			Cerebro-Spinal Fever.		
	Cases.	Deaths.	Percentage of Deaths to Cases.	Cases.	Deaths.	Percentage of Deaths to Cases.	Cases.	Deaths.	Percentage of Deaths to Cases.	Cases.	Deaths.	Percentage of Deaths to Cases.	Cases.	Deaths.	Percentage of Deaths to Cases.	Cases.	Deaths.	Percentage of Deaths to Cases.	Cases.	Deaths.	Percentage of Deaths to Cases.	Cases.	Deaths.	Percentage of Deaths to Cases.
1886	26	3	11·5	12	4	33·3	224	31	13·8	...	Became notifiable in 1902.	...	212	51	24·0	1,306	42	3·2	...	Became notifiable in 1902.	...	...	Became notifiable in 1907.	...
1887	...	...	...	38	11	28·9	332	38	11·4	...		...	256	57	22·2	2,587	145	5·5	...		...	...		...
1888	1	...	...	23	5	21·7	245	27	11·0	...		...	245	65	26·5	618	20	3·2	...		...	...		...
1889	...	...	...	46	9	19·5	320	32	10·0	...		...	354	98	27·1	1,255	29	2·3	...		...	...		...
1890	...	...	...	7	1	14·3	500	44	8·8	...		...	361	85	23·5	1,197	46	4·0	...		...	...		...
1891	...	...	...	1	...	...	445	42	9·4	...		...	207	48	23·1	979	49	5·0	...		...	...		...
1892	8	...	...	18	3	16·6	238	28	11·7	...		...	203	42	20·6	1,856	69	3·7	...		...	...		...
1893	51	1	1·9	6	1	16·6	274	36	13·1	...		...	251	62	24·7	1,629	49	3·0	...		...	...		...
1894	537	56	10·4	3	1	33·3	310	38	12·2	...		...	362	86	23·7	1,821	65	3·5	...		...	...		..
1895	109	16	14·6	...	...	...	417	54	12·9	...		...	314	65	20·7	2,832	65	2·2	...		...	...		...
1896	...	...	...	10	3	30·0	328	36	10·9	...		...	251	52	20·7	2,185	48	2·1	...		...	...		...
1897	...	...	...	3	1	33·3	254	24	9·4	...		...	214	44	20·5	2,597	93	3·5	...		...	...		...
1898	7	...	...	79	9	11·4	241	27	11·2	...		...	269	38	14·1	2,387	72	3·0	...		...	...		...
1899	...	...	...	12	3	25·0	289	39	13·4	...		...	279	28	10·0	1,185	50	4·2	...		...	...		...
1900	5	...	...	35	3	8·5	249	25	10·0	...		...	483	52	10·0	991	27	2·7	...		...	...		...
1901	6	1	16·6	14	2	14·3	215	30	13·9	...		...	542	58	10·7	892	26	2·9	...		...	...		...
1902	7	...	...	10	1	10·0	192	27	14·0	26	18	69·2	408	32	7·8	812	30	3·6	513	25	4·8	...		...
1903	5	1	20·0	1	...	...	237	22	9·2	7	3	42·8	575	59	10·2	1,415	53	3·7	434	15	3·4	...		...
1904	168	15	8·9	6	...	...	196	22	11·2	14	11	78·5	752	63	8·3	1,070	31	2·8	353	15	4·2	...		...
1905	2	...	...	1	1	100·0	210	20	9·5	11	9	81·8	674	61	9·0	832	15	1·8	291	25	8·6	...		...
1906	...	...	...	...	...	...	144	11	7·6	11	9	81·8	667	48	7·1	987	34	3·4	337	25	7·4	...		...
1907	...	...	...	1	...	...	103	11	10·6	19	10	52·6	635	32	5·0	1,110	24	2·1	300	10	3·3	206	135	65·5
1908	20	...	...	...	...	...	68	6	8·8	13	3	23·0	389	16	4·1	1,993	32	1·6	260	11	4·2	53	23	43·4
*1909	2	...	...	...	...	...	39	5	12·8	23	12	52·1	423	38	8·9	1,522	50	3·2	207	10	4·8	28	16	57·1
1910	...	...	...	...	...	...	43	6	13·9	19	7	36·8	511	60	11·7	1,512	42	2·7	209	13	6·2	7	4	57·0
1911	...	...	...	...	...	...	31	3	9·7	15	7	46·6	605	49	8·0	1,075	24	2·2	241	12	4·9	3	3	100·0
1912	...	...	...	...	...	...	29	4	13·7	8	5	62·5	426	29	6·8	893	10	1·1	239	10	4·1	4	4	100·0
1913	...	...	...	...	...	...	45	10	22·2	18	11	61·1	448	35	7·8	1,675	43	2·5	223	6	2·6	3	2	66·6
1914	...	...	...	...	...	...	63	12	19·0	17	10	58·8	902	96	10·6	2,270	36	1·5	278	11	3·9	6	2	33·3
1915	...	...	...	...	...	...	21	3	14·3	16	8	50·0	900	107	11·8	1,748	58	3·3	280	10	3·5	72	44	61·1
1916	...	...	...	...	...	...	30	2	6·6	19	4	21·0	823	82	9·9	1,411	31	2·1	171	4	2·3	42	23	54·7
1917	...	...	...	...	...	...	6	2	33·3	22	12	54·5	584	65	11·1	748	16	2·1	160	12	7·5	45	18	40·0
1918	...	...	...	...	...	...	14	1	7·1	10	5	50·0	627	60	9·5	852	26	3·0	126	5	3·9	30	11	36·6
1919	...	...	...	...	...	...	6	...	...	19	9	47·3	734	79	10·7	1,459	39	2·6	177	10	5·6	15	7	46·6
1920	9	...	...	...	...	...	12	2	16·6	30	15	50·0	1014	63	6·2	1,420	14	0·9	275	20	7·2	14	10	71·4
†1921	...	...	...	...	...	...	9	...	...	36	15	41·7	991	75	7·5	2,163	42	1·9	363	22	6·0	7	4	57·1
1922	...	...	...	...	...	...	16	4	25·0	17	7	41·1	800	57	7·1	1,702	32	1·8	263	14	5·3	4	3	75·0
1923	...	...	...	...	...	...	29	2	6·9	33	17	54·5	770	69	8·9	1,897	93	4·9	257	17	6·6	12	8	66·6
1924	...	...	...	...	...	...	27	1	3·7	40	17	42·5	720	73	10·1	1,761	68	3·8	201	9	4·4	15	11	73·3
1925	...	...	...	...	...	...	30	1	3·3	27	11	40·7	870	82	9·4	2,351	62	2·6	270	14	5·2	12	10	83·3
1926	...	...	...	...	...	...	33	7	21·2	40	17	42·5	552	43	7·8	1,852	32	1·7	241	11	4·5	25	20	80·0
1927	...	...	...	...	...	...	78	2	2·6	63	24	38·1	599	44	7·3	1,848	19	1·0	240	14	5·8	30	25	83·3
1928	...	...	...	...	...	...	76	2	2·6	131	20	15·3	1171	55	4·7	1,154	3	·3	338	19	5·6	63	48	76·2
1929																								

and the percentage of admissions to total notifications in each year.

Year.	Smallpox.		Typhus Fever.		Enteric Fever.		Puerperal Fever.		Diphtheria, Membranous Croup.		Scarlet Fever.		Erysipelas.	
	Admissions.	Rate per cent. to Total Cases Notified.	Admissions.	Rate per cent. to Total Cases Notified.	Admissions.	Rate per cent. to Total Cases Notified.	Admissions.	Rate per cent. to Total Cases Notified.	Admissions.	Rate per cent. to Total Cases Notified.	Admissions.	Rate per cent. to Total Cases Notified.	Admissions.	Rate per cent. to Total Cases Notified.
1890	...	...	7	100·00	241	48·02			122	29·59	480	40·10		
1891	...	...	1	100·00	227	51·01			82	39·61	433	44·12		
1892	8	100·00	16	88·88	115	48·31			66	32·51	862	46·44		
1893	51	100·00	5	83·33	144	52·55			85	33·86	780	47·88		
1894	533	99·25	3	100·00	176	56·77			122	33·70	958	52·60		
1895	109	100·00	...	...	288	69·06			146	46·49	1519	53·63		
1896	...	...	10	100·00	233	71·03	Not N	otified	108	43·02	1381	63·20	Not N	otified
1897	...	...	3	100·00	175	68·89	until	1902.	109	50·93	1658	63·84	until	1902.
1898	7	100·00	78	98·73	143	51·03			111	41·26	1350	56·55		
1899	...	...	11	91·66	207	71·62			136	48·74	816	68·86		
1900	5	100·00	35	100·00	181	72·69			309	63·97	676	68·21		
1901	6	100·00	14	100·00	166	76·85			364	67·15	601	67·37		
1902	7	100·00	10	100·00	153	79·68	5	19·23	297	72·79	605	74·50	207	40·35
1903	5	100·00	...	...	214	90·29	...	...	429	74·60	1187	83·88	154	35·48
1904	168	100·00	6	100·00	174	88·77	1	7·14	579	76·99	942	88·03	136	38·52
1905	2	100·00	1	100·00	179	85·23	4	36·36	581	86·20	740	88·82	126	43·29
1906	...	...	...	...	132	91·66	7	63·63	589	88·30	880	89·15	146	43·32
1907	...	...	1	100·00	91	88·34	12	63·15	546	85·98	1026	92·43	152	50·66
1908	17	85·00	...	...	61	89·70	9	69·23	338	86·88	1882	94·43	133	51·15
1909	2	100·00	...	...	35	90·00	14	60·86	371	87·70	1442	94·74	108	52·17
1910	...	...	...	...	39	90·69	11	57·89	476	93·15	1423	94·11	91	43·54
1911	...	...	...	...	29	93·55	8	53·33	556	91·90	1007	93·67	131	54·35
1912	...	...	...	...	27	93·10	4	50·00	396	92·95	848	94·96	132	55·23
1913	...	...	...	...	41	91·11	8	44·44	416	92·85	1612	96·23	108	48·43
1914	...	...	...	...	56	88·88	12	70·59	856	94·90	2206	97·18	146	52·50
1915	...	...	...	...	19	90·47	8	50·00	883	98·11	1659	94·90	144	51·42
1916	...	...	...	...	28	93·33	10	52·63	797	96·84	1383	98·01	57	33·33
1917	...	...	...	...	5	83·33	11	50·00	567	97·08	727	97·19	74	46·25
1918	...	...	...	...	11	78·57	6	60·00	606	96·65	841	98·70	69	54·76
1919	...	...	...	...	6	100·00	7	36·84	716	97·54	1435	98·35	75	42·37
1920	9	100·00	...	...	10	83·33	13	50·00	981	96·74	1382	97·32	152	55·27
†1921	...	...	...	...	6	66·66	17	47·22	953	96·16	2103	97·22	163	44·90
1922	...	...	...	...	15	93·75	9	52·94	767	95·87	1611	94·65	117	44·48
1923	...	...	...	...	27	93·10	19	57·57	741	96·23	1780	94·15	138	53·69
1924	...	...	...	...	22	81·48	25	62·50	699	97·08	1644	93·35	84	41·79
1925	...	...	...	...	27	90·00	16	59·26	845	97·12	1944	82·68	87	32·22
1926	...	...	...	...	26	78·88	27	67·50	524	94·92	1534	82·83	77	31·95
1927	...	...	...	...	62	79·48	45	71·42	578	96·49	1593	86·20	114	47·50
1928	...	...	...	...	16	84·21	52	67·53	602	95·70	849	81·16	111	39·22
1929	...	...	...	...	70	92·10	106	80·91	1145	97·77	970	84·05	156	46·15

† City Boundaries extended to include Leith and Suburban area.

Table showing the Notifications of Infectious Diseases, classified according to size of house in which the infected persons resided.

Disease.	1 Apartment.		2 Apartments.		3 Apartments.		4 Apartments.		5 Apartments.		Over 5 Apartments.		Institutions and Military Quarters.		Total Cases.
	Number of Cases.	Percentage to Total Cases.	Number of Cases.	Percentage to Total Cases.	Number of Cases.	Percentage to Total Cases.	Number of Cases.	Percentage to Total Cases.	Number of Cases.	Percentage to Total Cases.	Number of Cases.	Percentage to Total Cases.	Number of Cases.	Percentage to Total Cases.	
Diphtheria	124	10·6	468	40·0	267	22·8	101	8·6	37	3·2	71	6·0	103	8·8	1171
Erysipelas	15	4·4	149	44·0	65	19·2	34	10·0	15	4·4	27	8·0	33	9·8	338
Scarlet Fever	46	4·0	375	32·5	330	28·6	141	12·2	54	4·7	152	13·2	56	4·8	1,154
Typhoid Fever	4	5·3	20	26·3	21	27·6	7	9·2	6	8·0	7	9·2	11	14·4	76
*Puerperal Fever	8	4·8	65	39·2	28	16·9	15	9·0	8	4·8	1	0·6	41	24·7	166
Cerebro-spinal Meningitis . . .	7	11·1	29	46·0	12	19·0	4	6·4	2	3·2	...	...	9	14·3	63
Totals . .	204	6·9	1106	37·3	723	24·3	302	10·2	122	4·1	258	8·7	253	8·5	2,968

* Includes Puerperal Pyrexia since 1st October.

TUBERCULOSIS.

The following Report has been prepared by Dr. John Guy, Tuberculosis Officer :—

I beg to present the Annual Report of the Tuberculosis Department for the past year. While there are no startling innovations to report, steady progress has been made toward the elimination of the disease.

During the year under review 596 cases of pulmonary tuberculosis were notified to the Department. It will be observed that the number of notifications of pulmonary tuberculosis has, with few exceptions, been decreasing each year since 1907. A most unsatisfactory feature in connection with the notifications is the number of cases which come to the knowledge of the Department for the first time through the medium of the Registrars' weekly death-returns. During the year no fewer than 62 such cases were discovered. It is difficult to account for such a large number of " missed " cases. It would be to the advantage of the patients and their friends alike if all cases of the disease were notified promptly. Early notification would in many instances enable the patients to enjoy the benefits of the City's Tuberculosis Scheme in the shape of hospital or domiciliary treatment.

The number of deaths registered during the year was 362. This total is slightly higher than the figure recorded in 1928, but it is below the average of the previous five years.

On page 34 there is a Table showing the number of deaths which have occurred annually from pulmonary tuberculosis during the last thirty years. In 1900 no fewer than 548 deaths were registered in the City as it existed previous to amalgamation with Leith and the Suburban Area. In 1929 in the same area, with a slightly increased population, only 268 deaths occurred. This excellent result of the policy pursued by the Local Authority gives cause for congratulation, and I am hopeful that the figures will be still further reduced in the near future.

One cannot speak too highly of the efforts that are being made by the Corporation to clear out and improve the various slum areas in different parts of the City. The transferring of the displaced families to the new housing areas is a work of first importance, and it will be one of the greatest factors in helping to eliminate tuberculosis and other diseases.

The three principal essentials for the abolition of tuberculosis are good nutrition, knowledge of the laws of hygiene, and good housing. Of these, nutrition is perhaps the most important, as a well nourished individual is capable of resisting disease much better than the underfed, although the environment of both may be equally bad.

While one cannot look for any dramatic fall in the death-rate from tuberculosis, the process of reduction should continue from year to year until, like typhoid fever, it becomes a spent force, or as in the case of typhus fever practically non-existent.

There exists in the minds of many scientific men a serious doubt as to what will be the outcome if we succeed in our efforts to eliminate tuberculosis altogether.

As a race we owe our resistance to the disease to the fact that, after countless generations during which we have been subjected to its influence, we have been able to develop a certain degree of immunity from the disease. The fear has been expressed that this immunity or resistance may ultimately be lost through the gradual disappearance of the disease, and if the race becomes re-infected we may be attacked by a widespreading virulent type of tuberculosis analogous to what is known to-day as " galloping consumption."

This is a purely theoretical consideration, and if pushed to its logical conclusion, it might be said that we ought now to refrain from attempting to eliminate tuberculosis. For my own part, I prefer to deal with the risks as they appear, and to make an effort to prevent the thousands of deaths which take place annually from the disease and to ignore altogether the problematical consequences.

Leprosy for example has been eliminated and no untoward effects have followed. The same may be said regarding typhoid fever, and to a greater extent typhus fever. These diseases are not, of course, strictly analogous to tuberculosis, but they are close enough to point the way to truth.

In regard to the non-pulmonary forms of tuberculosis, it is interesting to report that there has been a marked diminution in the number of cases as compared with previous years. In 1921, the first year after the City boundaries were extended, 537 cases were intimated, while during the year under review only 317 new cases were reported to the Department.

The greatest number of cases in the non-pulmonary group are those associated with the glands, the abdomen, and the brain. These together account for 226 of the 317 cases notified. The bones and the joints form a comparatively small part of the total, only 40 cases having been reported during the year.

The work at the various hospitals continues as heretofore. The only outstanding feature during the year was the transfer of the advanced cases of pulmonary tuberculosis from Pilton to Colinton Mains Hospital. The re-arrangement was considered necessary in view of the changes that are likely to take place in hospital administration through the introduction of the Local Government (Scotland) Act, 1929.

I have again to direct attention to the pressing need for more accommodation for patients in the advanced stages of tuberculosis. It is a distressing feature of our work to go round the hospital wards and select patients for discharge, whose home conditions, it may be, are far from ideal, but one has no option when the beds are required for other and what appear to be more clamant cases.

I have been trying several new remedies during the year but nothing has as yet been discovered that is likely to prove a specific for the cure of the disease. It may be, however, that the enormous amount of research work which is at present being carried on will result in a remedy being found.

Abundant use is still being made of the anti-Tuberculosis Dispensaries under the control of the Department. One very pleasing feature is the enormous number of special consultations which take place at these institutions, practitioners making a very full use of the exceptional opportunities which the Dispensaries present for the diagnosis of early cases of the disease.

I append under appropriate headings the statistics relative to the notifications and deaths, and also particulars regarding the Municipal Institutions for the treatment of tuberculosis.

I have to thank the various members of the Staff for the efficiency and smooth-working of this Department.

I remain,

Yours faithfully,

JOHN GUY,
M.D., D.P.H. (Camb.), F.R.F.P. & S. (Glas.),
F.R.C.P. (Edinburgh.).
Tuberculosis Officer.

PULMONARY TUBERCULOSIS.

Notifications.—In tabulating the notifications received during the year all duplicate intimations were eliminated. In accordance with the Pulmonary Tuberculosis Regulations, particulars regarding 48 non-residents notified to the Department were transmitted to the Medical Officer in whose district the permanent residence of the patient was situated. These notifications are not therefore included in the City Register of cases. In the course of the twelve months 10 notifications referring to Edinburgh citizens who had been reported to other Local Authorities as suffering from pulmonary tuberculosis were included in the City records.

After these adjustments were made it was found that the actual number of Edinburgh citizens notified during the year was 596, as compared with 581 in 1928 and 593 in 1927.

The following Table shows the number of cases intimated annually, together with the incidence rate per 1,000 of the population, since pulmonary tuberculosis first became compulsory notifiable in the City :—

1907	651 or 2·0 per 1000.	1919	602 ,, 1·9 per 1000.
1908	713 ,, 2·2 ,,	1920	616 ,, 1·9 ,,
1909	744 ,, 2·3 ,,	*1921	817 ,, 1·9 ,,
1910	763 ,, 2·3 ,,	1922	762 ,, 1·8 ,,
1911	1052 ,, 3·3 ,,	1923	692 ,, 1·6 ,,
1912	1255 ,, 3·9 ,,	1924	799 ,, 1·9 ,,
1913	1010 ,, 3·1 ,,	1925	670 ,, 1·6 ,,
1914	808 ,, 2·4 ,,	1926	656 ,, 1·5 ,,
1915	690 ,, 2·1 ,,	1927	593 ,, 1·4 ,,
1916	628 ,, 1·9 ,,	1928	581 ,, 1·4 ,,
1917	655 ,, 2·0 ,,	1929	596 ,, 1·4 ,,
1918	643 ,, 2·0 ,,		

* City Boundaries extended to include Leith and Suburban Area.

The distribution of the cases according to the different districts of the City and the incidence per 1,000 of the population resident in each area is as follows :—

Area.	Notifications.	Rate per 1000 of Population.
Edinburgh	421	1·4
Leith	130	1·6
Suburban	23	0·8
Institutions, etc.	22	...
Whole City	596	1·4

The sex and age distribution of the persons notified during the year is set out in the following Table. Of the total new cases reported, 323 referred to males and 273 to females. As regards the age incidence, the percentage of cases classified in the age groups up to 25 years was equal to 33·4 of the total notified ; from 25 to 50 years, 45·3 per cent. ; and above that age, 21·2 per cent. It will also be noted from a perusal of the figures that in the later age-periods the males are in much greater proportion than females.

Sex.	Under 5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-35.	35-40.	40-45.	45-50.	50-55.	55-60.	60-65.	65-70.	70 and over.	Total.
Male	4	9	11	35	42	32	23	19	29	35	29	28	14	6	7	323
Female	8	6	7	28	49	33	27	24	32	17	11	13	7	5	6	273
Total	12	15	18	63	91	65	50	43	61	52	40	41	21	11	13	596

In the next Table the notifications have been tabulated to show the incidence of the disease in the respective Municipal Wards.

	Notifications.	Rate per 1000.		Notifications.	Rate per 1000.
Calton	40	1·8	George Square	40	1·9
Canongate	30	1·4	St. Leonard's	41	2·0
Newington	19	1·0	Portobello	25	1·0
Morningside	12	·6	South Leith	42	1·5
Merchiston	15	·7	North Leith	46	2·4
Gorgie	31	1·2	West Leith	20	1·1
Haymarket	14	·9	Central Leith	22	1·6
St. Bernard's	13	·7	Liberton	12	1·2
Broughton	22	1·5	Colinton	3	·4
St. Stephen's	28	1·7	Corstorphine and Cramond	8	·7
St. Andrew's	20	1·9	Institutions (other than Sanatoria)	21	...
St. Giles	41	2·2	Military Quarters	1	...
Dalry	30	1·4			

The highest notification incidence in the Edinburgh area was recorded in St. Giles Ward, viz., 2·2 per 1,000 of the population estimated to be resident in the Ward. This was closely followed by St. Leonard's Ward with 2·0 per 1,000, while George Square Ward returned a rate of 1·9.

In the Leith area the North Ward returned a rate of 2·4 per 1,000 of the population. This represents the highest incidence for pulmonary tuberculosis in the whole of the extended City. There are still many overcrowded districts in this Ward notwithstanding the recent Slum Clearance Scheme.

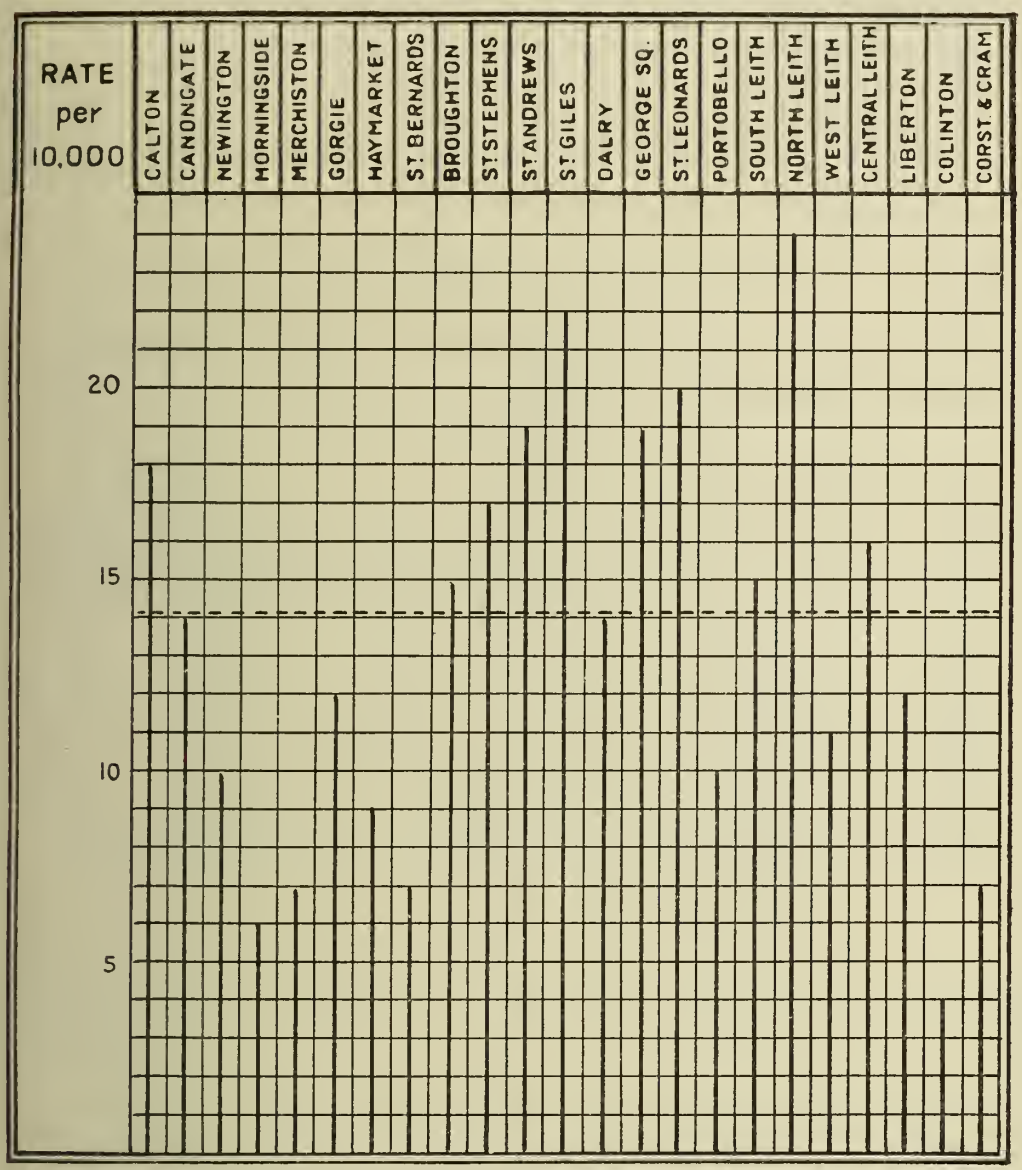
In the Central Ward the rate was equal to 1·6 per 1,000, as compared with 2·2 in 1928.

The three Wards comprising the Suburban district all returned incidence rates below the average for the City. The Liberton Ward, which includes a large mining population, returned a rate of 1·2 per 1,000, while the rates recorded for Colinton Ward and Corstorphine and Cramond Ward were ·4 and ·7 respectively.

In the following diagram the incidence of the disease in the various Wards can be readily compared with the rate for the City.

PULMONARY TUBERCULOSIS.

Notifications per 10,000 of Population.



In the following Table the notifications are classified to show the type of house occupied by the infected persons.

1-roomed house.	2-roomed house.	3-roomed house.	4 rooms and over.	Lodging-Houses.	Institutions.	Total.
53	187	185	132	17	22	596

Deaths.—The deaths from pulmonary tuberculosis during the year number 362. Of these, 336 occurred within the City, 20 at Bangour Village, and 6 in other parts of Scotland.

The death-rate for the year calculated on the corrected number of deaths was equivalent to ·8 per 1,000 of the estimated population. The average annual death-rate for the five years preceding 1929 was equal to ·9 per 1,000.

The mortality experienced in the different areas of the City during the year was as under :—

Area.	Deaths.	Rate per 1000 of Population.
Edinburgh	268	·9
Leith	67	·8
Suburban	16	·6
Institutions	11	...
Whole City	362	·8

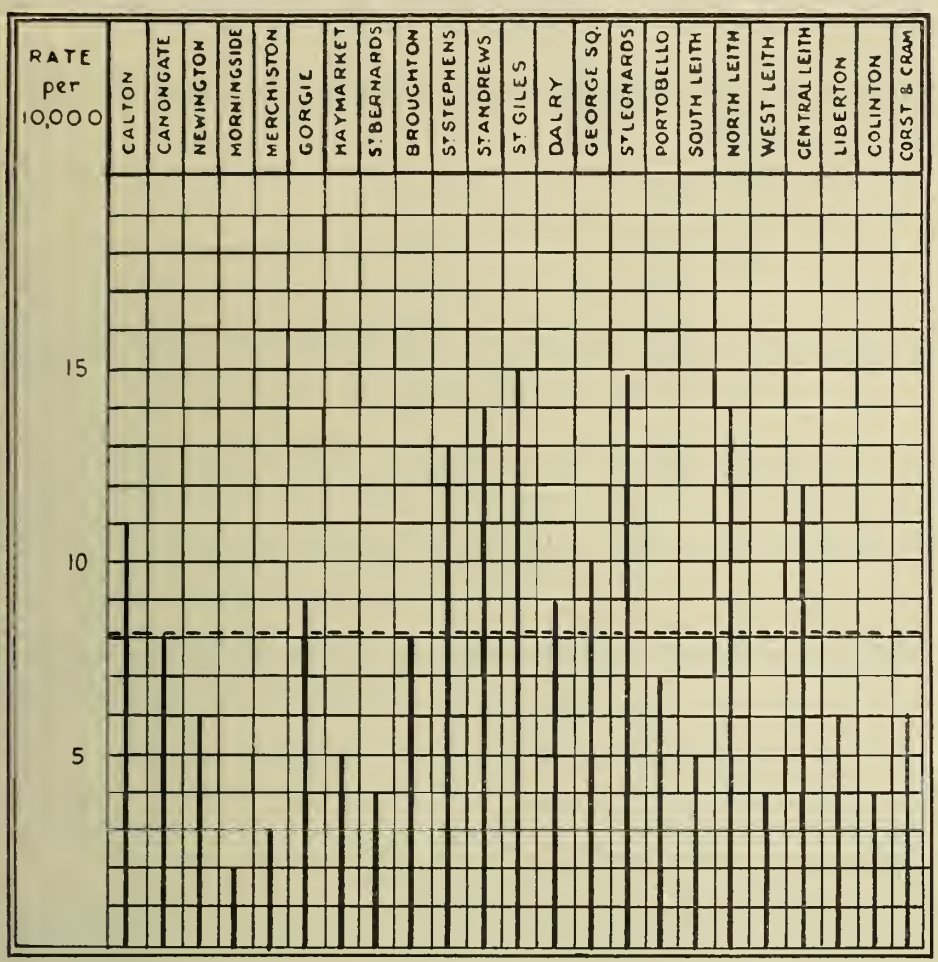
The accompanying Table shows the deaths in the various Wards tabulated according to the residence of the deceased persons :—

WARDS.	Number of Deaths.	Rate per 1000.	Sex.		Age-periods.						
			Male.	Female.	Under 15 years.	15 and under 20 years.	20 and under 25 years.	25 and under 35 years.	35 and under 45 years.	45 and under 55 years.	55 and under 65 years.	65 y and wa
Calton	24	1·1	14	10	2	1	6	2	3	3	5	
Canongate	16	·8	11	5	1	3	2	4	3	1	2	
Newington	12	·6	5	7	...	2	2	2	1	4	1	
Morningside	5	·2	4	1	...	...	...	2	...	1	1	
Merchiston	6	·3	3	3	...	...	2	2	...	...	1	
Gorgie	23	·9	13	10	1	...	4	4	6	5	3	
Haymarket	9	·5	4	5	...	...	1	1	1	3	2	
St. Bernard's	8	·4	5	3	...	...	...	2	4	...	1	
Broughton	11	·8	8	3	...	2	2	4	1	1	1	
St. Stephen's	22	1·3	6	16	...	2	1	6	4	7	2	
St. Andrew's	15	1·4	8	7	1	2	1	3	2	1	3	
St. Giles	29	1·5	14	15	1	3	5	9	5	...	5	
Dalry	18	·9	7	11	3	...	2	5	3	4	...	
George Square	21	1·0	13	8	1	1	...	2	3	9	3	
St. Leonard's	31	1·5	19	12	4	2	5	5	9	2	1	
Portobello	18	·7	10	8	...	3	5	2	3	3	1	
South Leith	16	·5	9	7	1	3	...	8	2	1	1	
North Leith	26	1·4	14	12	1	3	1	7	4	5	4	
West Leith	8	·4	5	3	1	...	1	2	3	...	1	
Central Leith	17	1·2	12	5	1	1	1	3	6	3	2	
Liberton	6	·6	5	1	...	...	4	1	...	1	...	
Colinton	3	·4	3	...	1	1	...	...	1	...	...	
Corstorphine and Cramond	7	·6	2	5	...	...	1	1	4	...	...	
Institutions (other than Sanatoria)	11	...	4	7	...	1	1	3	1	2	2	
Military Quarters	...	...	...	...	...	...	...	...	...	...	...	
Totals	362	·8	198	164	19	30	47	80	69	56	42	1
Edinburgh Area	268	·9	144	124	14	21	38	55	48	44	32	1
Leith Area	67	·8	40	27	4	7	3	20	15	9	8	
Suburban Area	16	·6	10	6	1	1	5	2	5	1	...	
Institutions	11	...	4	7	...	1	1	3	1	2	2	

The following diagram gives a comparative view of the death-rates recorded in each of the twenty-three Wards into which the City is divided for municipal purposes :—

PULMONARY TUBERCULOSIS.

Death-Rate per 10,000 of Population.



Deaths in relation to Notifications.—In the next Table the deaths from pulmonary tuberculosis are tabulated to show the lapse of time between notification and death :—

Year.	Within 1 month.	From 1 to 3 months.	From 3 to 6 months.	From 6 months to 1 year.	From 1 to 2 years.	Over 2 years and under 3.	Over 3 years and under 4.	From 4 years upwards.	Notified after Death.	Total.
1921	45	47	29	60	43	21	7	19	110	381
1922	38	37	43	56	53	23	13	25	79	367
1923	51	49	30	45	49	35	13	38	87	397
1924	49	48	49	51	67	34	21	49	56	424
1925	57	47	35	38	48	28	14	47	87	401
1926	49	42	36	38	42	27	11	42	69	356
1927	46	41	28	47	60	30	14	47	68	381
1928	56	41	23	26	47	26	14	51	61	345
1929	53	33	39	36	52	23	11	53	62	362

I have again to direct attention to the number of cases which only come to the knowledge of the Department through the medium of the Registrars' weekly death returns. During the year 62 such cases were revealed.

NON-PULMONARY TUBERCULOSIS.

Notifications.—The total number of new cases of non-pulmonary tuberculosis, intimated to the Department during the year under review was 657. From this figure,

however, there have to be deducted 350 notifications relating principally to children diagnosed at the Royal Sick Children's Hospital, which were transferred to districts outwith the City. On the other hand, particulars were received regarding 10 Edinburgh citizens whose illness had been reported to other Local Authorities.

The net number of notifications to be allocated to the City is therefore 317, and it is only these cases that are dealt with in the accompanying statistics.

The number of cases of non-pulmonary tuberculosis intimated in each of the last nine years is as follows :—

Year.	Notifications.	Rate per 1000 of Population.
1921	537	1·3
1922	485	1·1
1923	482	1·1
1924	455	1·1
1925	498	1·2
1926	433	1·0
1927	359	·8
1928	347	·8
1929	317	·7

The age and sex incidence is shown in the following Table :—

Sex.	Under 5.	5-10.	10-15.	15-20.	20-25.	25-30.	30-35.	35-40.	40-45.	45-50.	50-55.	55-60.	60-65.	65-70.	70 and over.	Total.
Male . .	58	27	10	12	8	6	6	3	5	3	3	1	3	...	2	147
Female .	38	30	20	22	18	14	9	6	4	2	3	...	1	2	1	170
Total .	96	57	30	34	26	20	15	9	9	5	6	1	4	2	3	317

In the accompanying Table the notifications are classified according to Wards. The incidence rate for each Ward is also given in order that the prevalence in the various districts may be compared :—

	Notifications.	Rate per 1000.		Notifications.	Rate per 1000.
Calton	22	1·0	George Square . .	13	·6
Canongate . . .	20	·9	St. Leonard's . . .	12	·6
Newington . . .	7	·4	Portobello . . .	19	·7
Morningside . . .	4	·2	South Leith . . .	22	·8
Merchiston . . .	9	·4	North Leith . . .	26	1·4
Gorgie	18	·7	West Leith . . .	12	·7
Haymarket . . .	9	·5	Central Leith . . .	21	1·5
St. Bernard's . . .	15	·8	Liberton. . . .	8	·8
Broughton . . .	9	·6	Colinton . . .	2	·3
St. Stephen's . .	13	·8	Corstorphine and Cramond	2	·2
St. Andrew's . . .	7	·7	Institutions (other than Sanatoria) . . .	7	...
St. Giles . . .	18	1·0	Military Quarters . .	1	...
Dalry	21	1·0			

Edinburgh, 216=·7 ; Leith, 81=1·0 ; Suburban, 12=·4 ; Institutions, etc., 8.

In the next Table particulars are given showing the size of house occupied by the patients at date of notification.

1-roomed house.	2-roomed house.	3-roomed house.	4 rooms and over.	Lodging-Houses.	Institutions.	Total.
25	119	99	60	6	8	317

In the accompanying list the cases are tabulated to show the region affected by the disease :—

Glands		99	
Abdomen		73	
Meninges and Brain		54	
Lupus		9	
Genito-Urinary		15	
Spine		15	
General		5	
		—	270
Bones (except Spine)—			
Thigh		4	
Leg		2	
Foot		4	
Arm		2	
Hand		6	
Rib		2	
Not specified		5	
		—	25
Joints—			
Hip		5	
Shoulder		1	
Elbow		3	
Knee		6	
		—	15
Others			7
	Total		317

Deaths.—The deaths classified in the non-pulmonary tuberculosis group numbered 112, as compared with 103 in the preceding year and 130 in 1927.

While the deaths show a slight increase on the number registered in 1928, it is extremely satisfactory to note that there has been a reduction of fully 38 per cent. as compared with the deaths recorded in 1921, the first complete year after the City boundaries were extended to include Leith and the Suburban area.

In the following Table the deaths are summarised according to age periods and the organ or region affected by the disease :—

Cause of Death.	All Ages.			Age Periods.											
	Both Sexes.	Males.	Females	-1	1-	5-	10-	15-	25-	35-	45-	55-	65-	75-	85 and over.
Tuberculous Meningitis	49	31	18	3	19	9	4	7	4	2	1	...	...	...	...
Tuberculosis of Intestines and Peritoneum	26	12	14	3	3	3	4	4	4	...	1	3	1	...	...
,, ,, Spine	2	2	...	...	...	...	...	1	...	...	...	1	...	...	...
,, ,, Joints	3	2	1	...	...	...	...	1	...	1	1	...	...	...	...
,, ,, Skin	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
,, ,, Bones (except spine)	2	2	...	...	1	...	...	1	...	...	...	...	...	...	...
,, ,, Lymphatic System	1	1	...	...	...	...	...	...	...	...	...	1	...	...	...
,, ,, Genito-urinary System	8	7	1	...	...	...	...	5	2	...	1	...	...	...	...
Disseminated Tuberculosis, acute & chronic	21	12	9	...	5	2	1	5	1	2	1	2	2	...	...
Other Non-Pulmonary Tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	112	69	43	6	28	14	9	24	11	5	5	7	3	...	...

The accompanying rates relative to the mortality experienced in the eight large Scottish towns have been extracted from the Registrar-General's preliminary statement for 1929 :—

Town.	Death-rate per 1000.		Town.	Death-rate per 1000.	
	Pulmonary Tuberculosis.	All forms of Tuberculosis.		Pulmonary Tuberculosis.	All forms of Tuberculosis.
Glasgow	·94	1·24	Paisley	·55	1·01
Edinburgh	·85	1·11	Greenock	1·04	1·30
Dundee	·78	1·05	Motherwell & Wishaw	·42	·56
Aberdeen	·56	·81	Clydebank	·69	1·19

The next Table shows the number of deaths from tuberculosis which have occurred annually in the City since 1900, together with death-rates per 1,000 of the estimated population :—

Deaths from Tuberculosis, 1900-1929.

Year.	Pulmonary Tuberculosis.				Other Tuberculous Disease.				All Tuberculosis.	
	Deaths.			Rate per 1000.	Deaths.			Rate per 1000.	Deaths.	Rate per 1000.
	Male.	Female.	Total.		Male.	Female.	Total.			
1900	302	246	548	1·8	141	129	270	·9	818	2·7
1901	284	241	525	1·7	148	129	277	·9	802	2·6
1902	262	215	477	1·5	120	95	215	·7	692	2·2
1903	244	223	467	1·5	114	117	231	·7	698	2·2
1904	223	185	408	1·3	121	125	246	·8	654	2·1
1905	232	206	438	1·4	109	93	202	·6	640	2·0
1906	193	180	373	1·2	108	110	218	·7	591	1·9
1907	203	192	395	1·2	123	100	223	·7	618	1·9
1908	197	198	395	1·2	123	92	215	·7	610	1·9
1909	251	177	428	1·3	90	103	193	·6	621	1·9
1910	223	166	389	1·2	82	83	165	·5	554	1·7
1911	211	181	392	1·2	101	92	193	·6	585	1·8
1912	226	180	406	1·3	93	87	180	·6	586	1·9
1913	186	178	364	1·1	84	91	175	·5	539	1·6
1914	213	166	379	1·2	89	101	190	·6	569	1·8
1915	193	179	372	1·2	92	69	161	·5	533	1·7
1916	198	158	356	1·1	81	82	163	·5	519	1·6
1917	201	190	391	1·2	100	84	184	·6	575	1·8
1918	141	180	321	1·0	74	89	163	·5	484	1·5
1919	161	159	320	1·0	70	82	152	·5	472	1·5
1920	161	125	286	·9	69	62	131	·4	417	1·3
*1921	187	194	381	·9	96	87	183	·4	564	1·3
1922	187	180	367	·9	72	93	165	·4	532	1·3
1923	214	183	397	·9	70	68	138	·3	535	1·2
1924	225	199	424	1·0	73	70	143	·3	567	1·3
1925	215	186	401	1·0	89	76	165	·4	566	1·4
1926	201	155	356	·8	60	66	126	·3	482	1·1
1927	193	188	381	·9	75	55	130	·3	511	1·2
1928	195	150	345	·8	46	57	103	·2	448	1·0
1929	198	164	362	·8	69	43	112	·3	474	1·1

*City Boundaries extended to include Leith and Suburban Area.

INSTITUTIONAL ACCOMMODATION AND TREATMENT.

Residential treatment for tuberculosis patients is provided at Municipal Hospitals as follows :—

Royal Victoria Hospital,	Pulmonary Tuberculosis . .	82 beds.
Polton Farm Colony	,, ,, . .	21 ,,
Colinton Mains Hospital	,, ,, . .	148 ,,
,, ,, ,,	Non-pulmonary Tuberculosis .	63 ,,
	Total . .	314 beds.

Royal Victoria Hospital.—This Institution is primarily used for the treatment of pulmonary tuberculosis patients in the early stages of the disease.

During the year 197 patients were admitted to the hospital, as compared with 211 admissions in 1928. The number discharged, including 2 patients who died, was 196, and 70 remained under treatment at the close of the year.

The following Table gives a classification of the patients passing through the hospital in the course of the twelve months :—

	Remained at 31st December 1928.	Admitted.	Discharged.	Died.	Remaining at 31st December 1929.
Men . .	34	88	85	1	36
Women . .	29	81	81	1	28
Children .	6	28	28	...	6
Totals .	69	197	194	2	70

A number of the patients were admitted for observation, and it is only those definitely diagnosed to be suffering from pulmonary tuberculosis who are dealt with in the accompanying statistical information.

Sex and age distribution of the discharged patients :—

	Under 5.	5-10.	10-15.	15-20.	20-30.	30-40.	40-50.	50-60.	Over 60.	Total.
Males . . .	2	5	6	11	31	15	7	4	...	81
Females . .	...	...	5	15	29	10	4	4	1	68
Totals . .	2	5	11	26	60	25	11	8	1	149

In the next Table the cases discharged from hospital have been classified to show the stage of the disease on admission and the condition of the patients on completion of their treatment :—

	Stage of Disease on Admission.			Condition on Discharge.			Died.
	A	B	C	Disease Arrested.	Improved.	Not Improved.	
Stage I.—							
Male . .	35	10	4	14	27	8	...
Female .	20	7	1	7	15	6	...
Total .	55	17	5	21	42	14	...
Stage II.—							
Male . .	11	10	2	3	13	7	...
Female .	14	8	2	1	18	5	...
Total . .	25	18	4	4	31	12	...
Stage III.—							
Male . .	3	4	2	...	5	3	1
Female .	3	7	6	...	10	5	1
Total . .	6	11	8	...	15	8	2
Totals .	86	46	17	25	88	34	2

PRESENCE OR ABSENCE OF TUBERCLE BACILLI.

	ON ADMISSION.		ON DISCHARGE.	
	T.B. Present.	T.B. Absent.	T.B. Present.	T.B. Absent.
Stage I. . .	27	50	18	59
,, II. .	34	13	29	18
,, III. .	20	5	18	7
Totals	81	68	65	84

The complications noted in patients were as follows :—

Pleurisy	2	Abdominal Tuberculosis . .	1
Tuberculous Meningitis . .	2	Disseminated Sclerosis . . .	1
Tuberculosis of Larynx . .	1	Pneumococcal Meningitis . .	1

The average length of residence of the discharged patients was 118 days.

Pilton Hospital.—Since the extension of the City boundaries in 1920 the greater part of this hospital has been used to segregate a large number of patients in the later stages of pulmonary tuberculosis.

In view of the changes likely to take place in hospital administration through the operation of The Local Government (Scotland) Act, 1929, it was decided to transfer the tuberculosis patients to Colinton Mains Hospital and to utilise the accommodation set free at Pilton for other purposes.

The transfer of the patients took place in the month of November, and the accompanying statistics include the cases admitted to Colinton Mains Hospital, which would otherwise have been sent to Pilton, up to the end of the year.

The following Table shows the number of patients dealt with during 1929 :—

	Remained at 31st December 1928.	Admitted.	Discharged.	Died.	Remaining at 31st December 1929.
Men . .	47	187	130	58	46
Women .	39	168	115	53	39
Children .	4	10	11	2	1
Totals .	90	365	256	113	86

In the course of the year 256 patients were discharged and 113 died. Of these, 314 were definitely recognised as true cases of pulmonary tuberculosis, and it is only these cases that are tabulated in the following Tables :—

Sex and age distribution of discharged patients :—

	Under 5.	5-10.	10-15.	15-20.	20-30.	30-40.	40-50.	50-60.	Over 60.	Total.
Males . .	1	3	7	19	46	36	31	17	10	170
Females . .	...	1	6	33	46	33	15	7	3	144
Totals . .	1	4	13	52	92	69	46	24	13	314

In the next Table the patients are classified to show the stage of the disease on admission and their condition on discharge.

	Stage of Disease on Admission.			Condition on Discharge.		Died.
	A	B	C	Improved.	Not Improved.	
Stage I.—						
Male . .	5	6	...	10	1	...
Female . .	...	2	1	3	...	...
Total . .	5	8	1	13	1	...
Stage II.—						
Male . .	5	26	4	22	11	2
Female . .	2	16	2	18	1	1
Total . .	7	42	6	40	12	3
Stage III.—						
Male . .	4	62	58	54	20	50
Female . .	3	42	76	49	19	53
Total . .	7	104	134	103	39	103
Totals . .	19	154	141	156	52	106

PRESENCE OR ABSENCE OF TUBERCLE BACILLI.

	ON ADMISSION.		ON DISCHARGE.	
	T.B. Present.	T.B. Absent.	T.B. Present.	T.B. Absent.
Stage I. . .	7	7	5	9
,, II. .	38	17	27	28
,, III. .	188	57	142	103
Totals .	233	81	174	140

The average length of residence in hospital of the discharged patients was 100 days.

Colinton Mains Hospital.—The accommodation at this hospital has hitherto been limited to 63 beds for the treatment of non-pulmonary forms of tuberculosis ; and 48 for patients suffering from the pulmonary type of the disease.

In the month of November, however, a re-arrangement of the hospital accommodation was decided upon, and as a result patients in the advanced stages of pulmonary tuberculosis, formerly dealt with at Pilton Hospital, will now be treated at Colinton Mains.

Including the cases transferred from Pilton Hospital in the month of November, there were 180 patients under treatment at the end of the year. Of these 110 were pulmonary cases and 70 were suffering from various other forms of tuberculosis.

The particulars in the accompanying Tables refer only to the non-pulmonary cases :—

Patients Admitted and Discharged.

Sex.	Number of Patients at 1st January.	From 1st Jan. to 31st Dec. 1929.			Number of Patients remaining at 31st December.
		Admitted.	Discharged.	Died.	
Males .	49	22	28	4	39
Females .	29	34	29	3	31

Age Distribution of Patients Admitted.

Sex.	Under 5.	5-10.	10-15.	15-20.	20-30.	30-40.	40-50.	Total.
Males . . .	7	5	2	2	3	1	2	22
Females . . .	3	10	4	5	8	1	3	34

Parts Affected by Disease in Patients Admitted.

Part Affected.	Males.	Females.	Part Affected.	Males.	Females.
Abdomen . . .	6	10	Leg, Foot . .	3	3
Spine . . .	7	12	Other Forms . .	2	2
Glands . . .	...	1			
Hip	3	2			
Knee	1	4	Totals . .	22	34

Condition of Patients on Discharge.

	Males.	Females.	Total.
Apparently Cured	10	8	18
Improved . .	14	15	29
Not Improved .	4	6	10
Totals . .	28	29	57

Parts Affected by Disease in Patients who Died, with Ultimate Cause of Death.

	Part Affected.	Ultimate Cause of Death.
Males	1 Dorsal Vertebra	—Tuberculous Meningitis.
	1 Glands	—Carcinoma of Prostate, Chronic Myocarditis.
	1 Hip	—Tuberculosis of Left Hip, Cachexia, Myocarditis.
	1 Kidney	—Tuberculosis of Kidney, Uræmia.
Females	1 Abdomen	—Tuberculous Ulceration of Bowel, Myocarditis.
	1 ,,	—Pulmonary Tuberculosis, Abdominal Tuberculosis.
	1 Peritoneum	—Tuberculous Meningitis.

Results with regard to Patients Discharged or Dying during the year.

Parts affected on Admission.	Males.	Apparently Cured.	Improved.	Not Improved.	Died.	Females.	Apparently Cured.	Improved.	Not Improved.	Died.	Total number of patients with parts affected.
Abdomen . .	7	3	3	1	...	12	5	3	1	3	19
Elbow . .	...	...	...	...	...	1	...	...	1	...	1
Foot . .	...	...	...	...	...	2	1	...	1	...	2
Genito-Urinary .	1	...	...	...	1	1	...	...	1	...	2
Glands . .	2	1	...	...	1	...	...	...	...	...	2
Hip . . .	5	1	3	...	1	1	...	1	...	...	6
Knee . .	3	1	2	...	...	4	1	2	1	...	7
Multiple . .	1	...	...	1	...	...	...	...	...	...	1
Ribs . . .	1	...	...	1	...	...	...	...	...	...	1
Spine . .	12	4	6	1	1	11	1	9	1	...	23
Totals .	32	10	14	4	4	32	8	15	6	3	64

Polton Farm Colony.—During the year 23 patients were admitted to the Colony, and 27 were discharged.

The Colony is situated a few miles from the City and is utilised for the further treatment of pulmonary tuberculosis patients discharged from hospitals under the control of the Department. Only those patients who are likely to benefit by a course of occupational treatment are selected for admission, and in many cases excellent results have been noted.

A model piggery and poultry farm are carried on in conjunction with the Colony, in addition to which there is an extensive garden.

The patients engage in the work of these undertakings and are supervised by an experienced farm manager.

The expenditure in connection with the Colony for the year to 15th May 1929 was £3,544, while the revenue from the sale of pigs, poultry, eggs, and other produce amounted to £1,750.

TUBERCULOSIS DISPENSARIES.

The Tuberculosis Dispensary occupies a most important place in the scheme for the treatment and supervision of the disease. Through this agency it is possible to keep in close touch with the notified cases, and much valuable curative and educational work is carried on.

The Corporation provide two dispensaries in connection with the scheme, the premises being conveniently situated to meet the requirements of the residents in different districts of the City.

The following Table shows the number of attendances at each dispensary during 1929 :—

	New Cases.		Old Cases.	
	Edinburgh.	Leith.	Edinburgh.	Leith.
Men	564	66	3083	507
Women . . .	570	127	2990	716
Children . . .	646	223	3011	548
Totals . .	1780	416	9084	1771

Home Visitation.—The home visitation of the tuberculosis patients is carried on by a staff of trained nurses attached to the dispensaries. During the year, 13,603 domiciliary visits were made to patients, the number in each month being as follows :—

	Insured.	Not Insured.	Total.		Insured.	Not Insured.	Total.
January . .	544	670	1,214	August . .	588	533	1,121
February . .	531	568	1,099	September .	417	559	976
March . .	635	661	1,296	October . .	569	778	1,347
April . .	498	575	1,073	November . .	642	643	1,285
May . . .	578	701	1,279	December . .	490	505	995
June . .	611	604	1,215				
July . . .	344	359	703	Totals .	6,447	7,156	13,603

Artificial Sunlight Clinic.—As explained in previous Reports a Clinic is conducted at the Royal Victoria Dispensary for the treatment of tuberculosis patients by the Ultra Violet Rays. The installation at the Clinic consists of four Arc Lamps and one Mercury Vapour Lamp, and a specially trained nurse is in charge.

During the year under report, 190 medical and 50 surgical cases attended for treatment, and in all 12,415 exposures were made. In addition to this work, 1,580 dressings were applied by the nurse in charge of the clinic.

Extra Nourishment.—In 1916 Local Authorities were empowered to provide this form of domiciliary treatment to patients suffering from tuberculosis.

The treatment consists of a regulated daily supply of milk, eggs, and butter. This privilege is only granted to suitable cases and where the Tuberculosis Officer is satisfied that it is likely to prove beneficial.

The expenditure during the year for this form of treatment amounted to £227, 15s. 2d.

Drugs.—During the twelve months under report 1,700 prescription forms were issued by medical practitioners to tuberculosis patients under their care. The cost of this service amounted to £166, 18s. 6d.

In addition to the above the patients attending the dispensaries are supplied with all necessary drugs free of charge.

AFTER-CARE COMMITTEE.

I have again to express my appreciation of the help received from those associated with the After-Care Committee. Reference has been made in previous reports to the difficulties met with by a certain class of tuberculosis patients, more especially after their discharge from hospital.

The ladies connected with the Committee have been of great assistance in handling such cases and I am grateful to them for their kindly efforts to improve the position of a large number of unfortunate sufferers.

CITY HOSPITAL.

REPORT BY THE RESIDENT PHYSICIAN.

I have the honour to present the Annual Report of the City Hospital for the year 1929. During the year there were 3,793 patients admitted to the wards, of whom 259 were suffering from tuberculosis. The above total includes cases admitted from districts outside the City boundaries. The greatest number treated in hospital on any one day was 659, and the average daily number under treatment was 371.

Diphtheria.

The number of patients treated during the year 1929 exceeded the total of the previous year by more than 700. This increase was mainly accounted for by the unusually high incidence of diphtheria. 1,535 cases notified as diphtheria were admitted to the wards. This total constitutes a record for the hospital. The rapid influx of cases during November and December threw a heavy burden on the nursing staff.

Tuberculosis.

The transference of some 90 odd cases of pulmonary tuberculosis from Pilton Hospital to the City Hospital during the height of the diphtheria epidemic in November found our staff unable to cope with the work, and necessitated the temporary employment of additional trained nurses.

Puerperal Fever.

The treatment of puerperal infection has now become an important feature of the hospital work. During the year under review, 153 patients suspected to be suffering from puerperal fever were admitted to the wards. The following Table shows the rapid increase in the number of puerperal cases admitted to hospital during the past three years.

PUERPERAL FEVER.

Year.	1920.	1921.	1922.	1923.	1924.	1925.	1926.	1927.	1928.	1929.
No. of Cases . . .	19	17	10	21	25	20	27	62	72	153

A special ward had to be set aside for the accommodation of puerperal cases. Many of these patients require prolonged and careful nursing. An adequate nursing staff is essential for the successful treatment of these women. Glycerine treatment has thrown much additional work on the Resident Physician, and the routine bacteriological investigations have resulted in a marked increase in the work of the hospital laboratory.

Scarlet Fever.

The admission of patients suffering from scarlatina showed a slight increase on the previous year, yet the incidence during 1929 was still much below the average.

Balcony Accommodation.

The lack of balcony accommodation, particularly in the puerperal fever wards, is to be deplored. For a ward of twenty patients a balcony which will, with difficulty, accommodate three beds is quite inadequate.

Health of Staff.

Three nurses contracted erysipelas, one paratyphoid B. fever, two scarlet fever, and ten diphtheria. The unusually high incidence of diphtheria is disconcerting when we consider the measures employed to protect the nursing staff against the disease. It must be remembered, however, that an unusually large number of cases of diphtheria were nursed, of which many were very severe infections.

Five Schick positive nurses developed the disease, whilst five very mild infections occurred in nurses who had apparently been successfully immunised. One brilliantly Schick positive nurse, whilst on duty in a tuberculosis ward, contracted a very severe attack of faucial diphtheria within two weeks of her entering hospital. Fortunately all the cases made a good recovery.

The great value of the Dick test and subsequent active immunisation against scarlet fever has again been demonstrated. Only two nurses contracted scarlatina. One developed the disease prior to the application of the Dick test. The other case occurred in a Dick positive nurse some seven weeks after entering hospital.

Illness, other than infectious, resulted in loss of duty for varying periods of time in 102 cases.

Training of Nurses.

During the year, 24 nurses completed their training. Of these, 17 went to various hospitals to commence their general training, and 4 obtained posts as staff nurses in this, or other fever hospitals. Twenty-five nurses passed the State Examination.

Teaching.

Two hundred and twenty-five students attended clinics at the hospital. These were divided into six sections entailing 72 hours teaching. Two courses were held for candidates for the Diploma in Public Health. These courses were attended by 18 graduates. Three meetings during the summer vacation were devoted to post-graduate instruction. Including lectures to the nursing staff, 201 hours were devoted to teaching during the course of the year.

Hospital Laboratory.

The enormous number of 9,085 bacteriological examinations were carried out in the laboratory during the year. The amount of routine work performed in this department may be realised when we note that the bacteriological reports issued each year equal in number those issued from the Bacteriological Department of the University for the whole City.

The work has been very efficiently carried out by Mr Craig, the laboratory assistant.

Medical Staff.

I cannot speak too highly of the work performed by Dr. W. T. Gardiner, our Otologist. During the year he performed 10 mastoidectomies, and 153 operations for the removal of tonsils and adenoids. Two patients who harboured virulent diphtheria bacilli in the naso-pharynx for many weeks were eventually cured of their carrier condition by special operative measures carried out at our request by Dr. Gardiner.

Dr. James, our Consultant Physician, is still keenly interested in the work of the hospital.

A special word of praise is due to my Senior Medical Assistant, Dr. A. L. K. Rankine, whose loyal support has been invaluable. In addition to excellent work in the wards, he has carried out the routine immunisation of the nursing staff against diphtheria and scarlet fever, and has performed his bacteriological duties, during a particularly busy year, in a highly satisfactory manner.

I should like to take this opportunity of thanking the members of the Public Health Committee for remunerating this post of Senior Medical Assistant in a manner more commensurate with the duties entailed.

The Junior Assistant Medical Officers have performed their clinical duties in a thorough and efficient manner.

Nursing and General Staff.

I cannot speak too highly of the Matron, Sisters, and Nursing Staff for their untiring devotion to the welfare of the patients and for their loyal support in all difficulties.

The Steward, and the various officials responsible for the kitchen, laundry, and dispensary, have all maintained the efficiency of their respective departments at a high level.

I append the usual reports relating to the various infectious diseases treated in the hospital.

I have the honour to be, Sir,

Your obedient Servant,

W. T. BENSON,
M.D. (Ed.), B.Sc. (St. And.), D.P.H. (Camb.),
D.T.M. & H. (Lond.), F.R.C.P. (Ed.).

DIPHTHERIA.

Of 1,535 cases admitted to the diphtheria pavilions, 1,135 were finally diagnosed as suffering from diphtheria. Of the remainder, 250 were "carriers," and 150 were found to be suffering from diseases other than diphtheria. Various forms of tonsillitis, and other septic and ulcerative conditions of the throat and mouth, accounted for 112 cases :—catarrh, laryngitis, bronchitis, or pneumonia, were present in 24 ; scarlet fever, Vincent's angina and various other morbid conditions, were noted in the remainder.

There were 48 deaths ascribed to diphtheria. The mortality per cent. was 4·2, which is slightly lower than the record figure of 4·3 per cent. in 1928. Excluding laryngeal cases, the death-rate was 3·3 per cent.

The mortality of 98 laryngeal cases was 13·3 per cent.

Thirty-two laryngeal cases required operative interference.

Intubation was performed in 21 cases of whom 3 died. The intubation death-rate of 14·3 per cent. is the lowest in the hospital records, and is very striking when we compare it with the average rate of over 30 per cent. for the past ten years.

Tracheotomy was performed in 9 cases and of these 6 died.

Intubation followed by tracheotomy was performed in 2 cases—both recovered.

The paralysis rate was 5·1 per cent. indicating a mild type of the disease.

Serum rashes were noted in 115 cases, or 10·3 per cent. of the diphtheria patients treated.

Of the 48 deaths from diphtheria, 14 occurred within 24 hours of entry to hospital. In 10 of these cases death occurred within 12 hours of admission, the patient in each case being admitted practically moribund.

In other 20 patients treatment had been delayed until the fourth day of disease, or later.

Table showing age and sex of diphtheria patients :—

Age-period in years		0-1 yrs.	1-2 yrs.	2-3 yrs.	3-4 yrs.	4-5 yrs.	5-10 yrs.	10-15 yrs.	15 20 yrs.	20-30 yrs.	30-40 yrs.	40-50 yrs.	50+ yrs.	Totals.
Recovered	Males	5	28	36	51	49	211	53	19	13	6	1	1	473
	Females	11	15	31	54	46	254	56	44	50	34	11	8	614
Died	Males	2	4	2	7	3	7	...	...	...	...	...	...	25
	Females	...	3	2	3	3	11	...	...	...	...	...	1	23
Totals		18	50	71	115	101	483	109	63	63	40	12	10	1135

Hospital death-rate, 4·2 per cent.

The aspiration method of treatment in laryngeal diphtheria was tried in a few selected cases. It was soon found, however, that the simple water suction pump employed did not produce an adequate negative pressure. It is hoped that an electric suction pump will be available in the near future, when the method will be given an extended trial.

The technique was evolved in the Willard Parker Hospital for Contagious Diseases in New York City where, during the past five years, the aspiration treatment has been employed as a routine. The physicians conversant with the procedure appear to be very favourably impressed with its value. The statistical evidence so far available is not entirely convincing.

SCARLET FEVER.

During the year, 1,024 cases were admitted to the wards notified as scarlet fever. The diagnosis was confirmed in 938 patients.

Various forms of tonsillitis, or erythema, accounted for 63 of the 86 misdiagnosed cases.

The incidence of scarlet fever was for the second successive year unusually low.

There were 5 deaths. The case mortality-rate was 0·5 per cent. No toxic cases occurred. There were 7 septic cases, of which 3 died. Of the remaining 2 deaths, one occurred in a patient suffering from combined toxic diphtheria and scarlet fever, and the other in a case of combined toxic diphtheria, scarlatina, and acute mastoiditis.

The following are the principal complications which were noted :—

Late Adenitis . . .	63 cases, or	6·7 per cent.
Rhinitis	138 ,,	14·7 ,,
Otorrhœa	59 ,,	6·2 ,,
Arthritis	31 ,,	3·3 ,,
Nephritis	22 ,,	2·3 ,,
Endocarditis . . .	1 case, or	0·1 ,,

Table showing age and sex of scarlet fever patients :—

Age-period in years.		0-1 yr.	1-2 yrs.	2-3 yrs.	3-4 yrs.	4-5 yrs.	5-10 yrs.	10-15 yrs.	15-20 yrs.	20-30 yrs.	30-40 yrs.	40-50 yrs.	50-60 yrs.	60-70 yrs.	Totals.
Recovered	Males	2	13	20	24	35	162	64	33	27	17	4	2	0	403
	Females	1	9	18	35	35	243	78	42	45	14	7	2	1	530
Died	Males	...	...	1	...	...	...	...	...	...	...	...	...	...	1
	Females	...	...	...	2	...	1	...	1	...	...	...	...	...	4
Totals . .		3	22	39	61	70	406	142	76	72	31	11	4	1	938

Hospital death-rate, 0·5 per cent.

There were 27 alleged "infecting cases," or 2·8 per cent. of the total number of scarlet fever convalescents discharged.

The 27 "infecting cases" were responsible for 28 "return cases."

The return case-rate was 2·9 per cent.

Of the 27 alleged "infecting cases" 19 were "clean cases" whilst in hospital.

Antitoxic serum was administered in 38·6 per cent. of the cases in which the diagnosis was confirmed.

ENTERIC FEVER.

Of 89 cases admitted to the wards notified as enteric fever, 71 were found to be suffering from the disease.

The following diseases were noted in the group of 18 cases, either wrongly diagnosed as enteric fever, or sent in for observation :—pneumonia, influenza, tubercular meningitis, enteritis, Addison's disease, chickenpox, pulmonary tuberculosis, tonsillitis, and myelogenous leukæmia.

The infecting organism was the bacillus typhosus in 10 patients, and the bacillus paratyphosus B. in 61 cases.

One death occurred in the group of 10 typhoid patients. All the paratyphoid cases recovered.

Table showing age and sex of enteric fever patients :—

Age-period in years		0-5 yrs.	5-10 yrs.	10-15 yrs.	15-20 yrs.	20-30 yrs.	30-40 yrs.	40-50 yrs.	50-60 yrs.	60+ yrs.	Totals.
Recovered	Males	6	5	1	1	6	4	0	2	1	26
	Females	7	3	4	5	12	9	1	3	0	44
Died	Males	...	...	...	...	...	1	...	...	...	1
	Females	...	...	...	...	...	...	...	...	...	...
Totals		13	8	5	6	18	14	1	5	1	71

Hospital death-rate, 1·4 per cent.

ERYSIPELAS.

There were 204 cases admitted to the wards notified as erysipelas. The diagnosis was confirmed in 156 patients.

Of the remaining 48 cases, cellulitis was present in 15, various forms of dermatitis in 18, herpes in 4, furunculosis in 3, cavernous sinus thrombosis in 2, and suppurative adenitis, bursitis, sycosis, dacryocystitis and erythromelalgia in 1 case each.

The case mortality rate was 10·9 per cent.

In 148 out of the 156 cases the inflammation primarily affected the face.

Twenty patients, or 13 per cent. of the total admissions, had suffered from previous attacks. In 4 patients one or more relapses occured whilst under treatment in hospital.

Table showing age and sex of erysipelas patients :—

Age-period in years		0-5 yrs.	5-10 yrs.	10-20 yrs.	20-30 yrs.	30-40 yrs.	40-50 yrs.	50-60 yrs.	60-70 yrs.	70+ yrs.	Totals.
Recovered	Males	5	2	2	6	9	18	8	6	1	57
	Females	5	...	7	18	14	15	15	6	2	82
Died	Males	1	...	...	...	...	1	6	...	1	9
	Females	1	...	...	...	...	...	2	2	3	8
Totals		12	2	9	24	23	34	31	14	7	156

Hospital death-rate, 10·9 per cent.

A concentrated antitoxic and antibacterial serum prepared by Parke, Davis & Co., alleged to have a specific therapeutic action on erysipelas, was administered to more than seventy cases. Whilst rapid amelioration of constitutional symptoms followed the serum injection in a few patients, the results on the whole were disappointing. In no instance was the spread of the inflammatory process checked, and in by far the majority of cases the serum did not appear to exert any favourable action on the toxæmic disturbance.

CEREBRO-SPINAL MENINGITIS.

Sixty-four suspected cases of cerebro-spinal fever were admitted to hospital, of which 49 proved to be meningococcal. Six patients were suffering from tubercular meningitis ; 2 from lobar pneumonia ; 3 from meningism ; and one each from pyelitis, paratyphoid B., encephalitis, and nephritis.

Forty-two of the meningococcal cases died.

Death in two cases was due to secondary infection with a pneumococcus and a streptococcus respectively.

The delay in the administration of serum may partly account for the very high death-rate, namely, 83 per cent. It is difficult to resist the conclusion, however, that the therapeutic sera at present available do not exert any specific action on the strains of meningococci met with in Edinburgh. Polyvalent antimeningococcal sera prepared by five well-known commercial firms were employed. In many resistant cases, three different commercial sera were tried without success.

Table showing age and sex of patients suffering from cerebro-spinal meningitis :—

Age-period in years	0-1 year.	1-5 years.	5-10 years.	10-15 years.	15-20 years.	20-30 years.	30-40 years.	40+ years.	Totals.
Recovered Males	1	3	...	...	...	...	...	...	4
Recovered Females	1	1	...	1	...	...	...	...	3
Died Males	11	5	4	...	2	1	...	...	23
Died Females	7	6	1	1	1	...	1	2	19
Totals	20	15	5	2	3	1	1	2	49

Hospital death-rate, 83·6 per cent.

PUERPERAL INFECTION.

Of 153 cases notified as puerperal fever the diagnosis was confirmed in 149. Thirty-one of these cases were admitted from districts outwith the City boundaries.

Twenty-five of the 149 cases died, a mortality rate of 16·7 per cent. Seventy-seven cases were multiparæ, and 72 primiparæ.

There were 18 deaths (23·4 per cent) among the multiparæ, and 7 (9·7 per cent.) among the primiparæ.

The 4 cases in which the diagnosis was not confirmed were found to be suffering from mammary abscess (2 patients), influenza (1 patient), and pneumonia and empyema (1 patient).

Pyelitis or bacilluria was present in 61 cases (40 per cent.).

The following complications were noted :—pelvic cellulitis, peritonitis, phlebitis, cystitis, pleurisy, pneumonia, empyema, mental disorders, pyæmia, and gangrene.

Gangrene of one or both feet developed in 7 patients, of whom 6 died.

Table showing age of puerperal infection patients :—

Age—Period in Years.	15–20 years.	20–30 years.	30–40 years.	40+ years.	Totals.
Recovered	8	73	43	...	124
Died	...	9	13	3	25
Totals	8	82	56	3	149

Hospital death-rate, 16·7 per cent.

The Table indicates the effect of age on the prognosis of puerperal infection. Of 8 patients under twenty years of age all recovered, whilst the 3 patients over forty years of age died. The mortality rate, which was 10·9 per cent. for the twenty to thirty years age group, jumped to 23·2 per cent. in the group of patients between thirty and forty years of age.

There is still a tendency to delay the notification of pyrexia following child-birth.

The following Table shows the day of disease on which 139 patients were admitted to hospital :—

Day of disease on admission to hospital :—

Day of Disease.	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th & later.	Total.
Number of Cases	5	19	27	20	22	5	4	11	3	5	4	3	3	8	139

The average day of illness on which the patient first received treatment in hospital was the sixth.

That this delay appears to have an important bearing on the prognosis is indicated by the following figures :—

Day of disease on admission to hospital :—

Day of Disease.	First to Fourth inclusive.	Fifth day onwards.
Number of Cases . . .	71	68
Mortality Rate . . .	9·8 per cent.	19·1 per cent.

There can be no question of the value of institutional treatment for the majority of cases of puerperal infection, particularly under such favourable hygienic conditions as are present in the wards of the City Hospital. That the practitioner is now beginning to realise this fact is apparent in the very great increase in the number of cases admitted to the wards during recent years.

Number of cases of puerperal infection admitted to hospital each year from 1920 to 1929 inclusive :—

Year.	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
Number of cases . . .	19	17	10	21	25	20	27	62	72	153
Mortality Rate per cent. .	37·0	23·5	20·0	33·0	36·0	37·5	27·3	27·6	25·0	16·7

Whilst the notification of puerperal pyrexia and the services now available to facilitate early diagnosis are steps in the right direction, we do not view with equanimity the admission of doubtful cases to a ward full of patients proved to be suffering from puerperal infection. Side-room accommodation suitable for the observation of these undiagnosed cases is very limited.

A similar difficulty confronts us with regard to the admission of the infant where the mother has contracted puerperal sepsis.

Side-ward beds are already fully employed in dealing with the private patient, the delirious or maniacal patient, and the observation case.

We still await a specific remedy in the treatment of puerperal infection. Glycerine treatment, particularly in early cases, is of undoubted value. Puerperal serum, scarlet fever serum, erysipelas serum, polyvalent antistreptococcal serum have all been extensively employed, but the results so far obtained leave one with the impression that an effective specific serum has yet to be discovered.

PNEUMONIA.

There were 168 patients admitted to the wards notified as primary pneumonia, or influenza and pneumonia. In 110 cases the diagnosis of pneumonia was confirmed. Clinical evidence pointed to the disease being of the lobar type in 49 patients, and of the broncho-pneumonic type in 61. Empyema developed in 9 cases.

Forty-five deaths occurred.

The corrected diagnosis in 58 cases was as follows :—Bronchitis in 31 cases ; influenza in 15 cases ; tonsillitis in 3 cases ; pulmonary tuberculosis in 3 cases ; tubercular meningitis and myo-fibrositis in 1 case each ; naso-pharyngeal catarrh, and tracheitis in 2 cases each.

Table showing age and sex of pneumonia patients :—

Age-period in years		0-5 years.	5-10 years.	10-15 years.	15-20 years.	20-30 years.	30-40 years.	40-50 years.	50 yrs.	Totals.
Recovered	Males	7	4	3	8	14	5	2	4	47
	Females	4	...	...	3	2	7	2	...	18
Died	Males	7	...	...	3	...	7	5	8	30
	Females	...	...	...	1	1	5	4	4	15
Totals		18	4	3	15	17	24	13	16	110

Hospital death-rate, 40·9 per cent.

WHOOPING COUGH.

The number of patients admitted to the wards notified as whooping cough was 111. The diagnosis was confirmed in 105 cases. Catarrh, bronchitis, or empyema, was present in one or other of the six misdiagnosed cases.

Broncho-pneumonia was present as a complication in 35 cases on admission. 29·4 per cent. of the total.

The fatality rate, 10·0 per cent., was again unusually low when we consider the type of case selected for hospital treatment.

Broncho-pneumonia was the cause of death in 10 patients. Two other cases died of hepatic cirrhosis, and tubercular meningitis, respectively.

Table showing age and sex of whooping cough patients :—

Age-period in years		0-1 year.	1-2 years.	2-3 years.	3-4 years.	4-5 years.	5-10 years.	Totals.
Recovered	Males	10	10	10	4	9	...	43
	Females	8	12	9	8	4	9	50
Died	Males	6	2	...	...	...	...	8
	Females	1	3	...	...	...	...	4
Totals		25	27	19	12	13	9	105

Hospital death-rate, 10·08 per cent.

MEASLES.

This was an unusually quiet year. There were only 42 cases admitted to the wards notified as measles. The diagnosis was confirmed in 31 patients. The remaining 11 cases were found to be suffering from rubella (2), erythema (2), scarlet fever (4), catarrh (2), and cellulitis (1).

All the measles cases recovered.

Broncho-pneumonia was noted as a complication in one patient, and four children developed otitis media.

Table showing age and sex of measles patients :—

Age-period in years		1-2 yrs.	2-3 yrs.	3-4 yrs.	4-5 yrs.	5-10 yrs.	10-15 yrs.	15-20 yrs.	20-30 yrs.	Totals.
Recovered	Males	...	1	1	...	5	1	...	1	9
	Females	1	1	1	1	7	3	1	7	22
Died	Males	...	...	...	...	...	...	...	...	...
	Females	...	...	...	...	...	...	...	...	...
Totals		1	2	2	1	12	4	1	8	31

CHICKENPOX.

The diagnosis was confirmed in the 67 cases admitted to hospital notified as chickenpox.

No deaths occurred.

Table showing age and sex of chickenpox patients :—

Age-period in years		0-1 year.	1-2 years.	2-3 years.	3-4 years.	4-5 years.	5-10 years.	10-15 years.	15-20 years.	20-30 years.	30-40 years.	Totals.
Recovered	Males	1	4	8	1	5	9	4	1	2	...	35
	Females	5	7	7	...	1	8	...	2	2	...	32
Died	Males	...	...	...	...	...	...	...	...	...	...	...
	Females	...	...	...	...	...	...	...	...	...	...	...
Totals		6	11	15	1	6	17	4	3	4	...	67

OTHER DISEASES.

ANTHRAX.—One case, which recovered, was admitted to hospital suffering from cutaneous anthrax.

DYSENTERY.—Of three cases notified as dysentery one was found to be suffering from a Flexner infection. Death ensued. One patient proved to be a case of non-specific entero-colitis, and the other died from uræmia and polycystic kidneys.

EPIDEMIC ENCEPHALITIS.—Five individuals alleged to be suffering from encephalitis lethargica were admitted to the wards. The diagnosis was confirmed in two cases, of which one died. A cerebral tumour was present in each of two misdiagnosed cases, and the third was provisionally diagnosed as influenza with meningism.

MUMPS.—Of 20 cases admitted to the wards notified as mumps, the diagnosis was confirmed in 19 patients. In one individual the parotid swelling was ascribed to iodism.

RUBELLA.—The diagnosis was confirmed in three out of six cases admitted to hospital notified as rubella. Measles or erythema accounted for the remaining three cases.

LABORATORY ANNUAL REPORT.

From 1st January to 31st December, 1929.

Specimens.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Throat Swabs . .	489	377	486	431	377	467	444	529	536	706	878	919	6639
Urines . . .	43	18	26	45	33	76	55	56	56	43	41	36	528
Stools . . .	13	11	14	27	9	39	54	22	23	6	9	5	232
C.S. Fluid . .	25	115	97	104	77	51	49	8	19	27	19	5	596
Blood Cultures . .	16	15	29	10	16	39	8	12	19	14	23	18	219
Widals . . .	1	3	10	18	8	30	10	8	14	1	1	3	107
Sputum . . .	41	42	64	65	39	28	38	29	22	20	28	99	515
Uterine Cultures .	0	0	0	17	14	12	14	11	14	11	16	11	120
General Specimens .	7	9	16	8	14	13	4	8	6	9	20	15	129
Monthly Total .	635	590	742	725	587	755	676	683	709	837	1035	1111	9085

BACTERIOLOGICAL EXAMINATIONS.

Examinations carried out by the Bacteriology Department of the University, from January to December 1929 :—

Routine Bacteriological Examinations.

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Throat, nasal and aural swabs for Bacillus diphtheriæ :—													
Total . .	523	449	477	407	507	435	659	455	592	900	1369	1007	7780
Positive . .	68	54	50	67	47	45	91	66	68	146	194	121	1017
Negative . .	455	395	427	340	460	390	568	389	524	754	1175	886	6763
Conjunctival swab for Bacillus diphtheriæ :—Total . .	...	...	...	...	...	...	...	1	...	...	...	...	1
Positive . .	...	...	...	...	...	...	...	0	...	...	...	...	0
Negative . .	...	...	...	...	...	...	...	1	...	...	...	...	1
Vaginal swabs for Bacillus diphtheriæ :— Total . .	...	...	2	...	...	...	...	...	...	...	...	...	2
Positive . .	...	...	1	...	...	...	...	...	...	...	...	...	1
Negative . .	...	...	1	...	...	...	...	...	...	...	...	...	1
Bacillus diphtheriæ virulence tests :— Total . .	6	15	17	7	15	3	3	7	7	17	15	12	124
Positive . .	4	6	9	3	9	3	2	1	3	5	10	7	62
Negative . .	2	9	8	4	6	0	1	6	4	12	5	5	62
Throat swabs for organisms of Vincent's angina :—													
Total . .	2	2	1	3	2	3	1	...	5	2	4	3	28
Positive . .	1	1	0	0	0	1	0	...	0	0	3	0	6
Negative . .	1	1	1	3	2	2	1	...	5	2	1	3	22
Sputum for Bacillus tuberculosis:—													
Total . .	81	86	124	74	87	59	57	51	42	73	72	55	861
Positive . .	8	12	17	12	14	5	10	12	6	13	11	6	126
Negative . .	73	74	107	62	73	54	47	39	36	60	61	49	735
Urine and fæces for Bacillus tuberculosis :—													
Total . .	3	1	1	...	...	...	...	...	...	1	2	...	8
Positive . .	0	0	0	...	...	...	...	...	...	0	0	...	0
Negative . .	3	1	1	...	...	...	...	...	...	1	2	...	8
Blood for agglutination tests (Enteric Fever) :—													
Total . .	2	2	6	2	5	15	11	8	1	5	1	6	64
Positive . .	0	0	0	0	0	7	6	3	0	0	0	2	18*
Negative . .	2	2	6	2	5	8	5	5	1	5	1	4	46
Fæces and urine for bacteria of Enteric Group :—													
Total . .	5	2	...	...	3	11	8	...	1	2	...	1	33
Positive . .	0	0	...	...	0	0	2	...	0	0	...	0	2*
Negative . .	5	2	...	...	3	11	6	...	1	2	...	1	31
Fæces examined for bacteria of Dysentery Group :—													
Total . .	...	...	...	...	...	...	...	...	...	2	...	...	2
Positive . .	...	...	...	...	...	...	...	...	...	0	...	...	0
Negative . .	...	...	...	...	...	...	...	...	...	2	...	...	2
Fæces examined for Amœbic Dysentery :—Total . .	...	...	...	1	1	...	...	...	...	...	...	...	2
Positive . .	...	...	...	1	0	...	...	...	...	...	...	...	1
Negative . .	...	...	...	0	1	...	...	...	...	...	...	...	1
Blood culture for diagnosis of Enteric Fever :—													
Total . .	...	...	...	...	1	...	...	...	...	...	...	...	1
Positive . .	...	...	...	...	0	...	...	...	...	...	...	...	0
Negative . .	...	...	...	...	1	...	...	...	...	...	...	...	1
Rats examined for Plague infection :—† Total . .	7	...	3	4	8	4	7	6	2	16	...	22	79
Positive . .	0	...	0	0	0	0	0	0	0	...	...	0	0
Negative . .	7	...	3	4	8	4	7	6	2	16	...	22	79
† These were carcases of rats caught in docks or on board ships arriving from foreign ports and were examined as a precautionary measure.											Forward		8985

* The positive results in Enteric cases may be classified as follows :—

Widal reactions	B. paratyphosus B. 16.	B. typhosus 2.
Cultural examination of urine and fæces .	B. paratyphosus B. 2.	B. typhosus 0.

	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Brought forward													8985
Other Examinations—Classified as follows—	11	11	67	28	42	12	42	18	9	52	23	28	

Nature of Specimen.	Examination Requested.		
Cultures	For Bacillus diphtheriæ	70	(10 positive.)
Throat swabs	For Hæmolytic streptococci	156	(18 positive.)
Cerebro-spinal fluid	For Bacillus tuberculosis	1	
Blood	For Bacillus anthracis	1	(positive.)
Sputum	Cytological	1	
Urine	For general bacteriological examination	17	
Urine	Examination for Leptospira (organism of Infectious Jaundice): microscopic and animal inoculation test	2	
Pus	General bacteriological examination	12	
Swab from gums	General bacteriological examination	1	
Vaginal and urethral swabs	For Gonococci	7	(1 positive.)
Blood	For Flocculation test (from V.D. Department)	47	(12 positive.)
Blood	For Wassermann Reaction (from V.D. Department)	3	(2 positive.)
Cultures	For serological "typing" of pneumococcus	5	
Cultures	For serological identification	4	
Blood	For agglutination of organisms of Bacillus dysenteriæ group	1	
Fæces	For Ankylostoma duodenale	1	
Fæces	For organisms of the food poisoning group	1	
Table jelly	For organisms of the food poisoning group	1	
Stomach contents	For organisms of the food poisoning group	1	
Milk	General bacteriological examination	1	
Aerated water	General bacteriological examination	1	
Spleen (Post-mortem)	General bacteriological examination	1	
Pleural fluid	General bacteriological examination	5	
Blood films	For malarial parasites	2	
Intestinal worm	For identification	1	
		—	343
	Total		9,328

It should be noted that during 1929 a much larger number of examinations were carried out than in any previo year. In 1928 the number was 5,745; an increase of 3,583 examinations during 1929 has to be recorded.

SPECIAL INVESTIGATIONS.

DIPHTHERIA DIAGNOSIS.

Routine examinations in connection with diphtheria diagnosis show a marked increase as compared with previous years. This was mainly due to the epidemic which occurred during the last quarter of the year. The increase in the number of virulence tests carried out, viz., 124, as compared with 38 during 1928, is also noteworthy. Further experience of the technique of the virulence test as described in the last annual report shows it to give very satisfactory results. The selective medium containing copper sulphate in addition to sodium tellurite as described by Allison and Ayling is particularly useful and no difficulty has been experienced in obtaining pure cultures in every case. The intradermal virulence test is used enabling a number of tests to be carried out on the same pair of animals. Such virulence tests tend to increase the expense of the laboratory diagnosis of diphtheria, but this additional cost must be more than off-set by the economy in hospital administration which results from the assistance provided by the virulence test in dealing with carriers of avirulent organisms. Such individuals may be returned to their homes without risk to those who may come into contact with them.

THE SEROLOGICAL DIAGNOSIS OF ENTERIC FEVER.

Within recent years considerable advances have been made in the study of the antigenic structure and relationships of the organisms of the typhoid-paratyphoid group. The variations to which these bacteria are subject have been carefully investigated and the results are capable of application to such well-established routine diagnostic procedures as the Widal Reaction in the enteric fevers. In the more recent standard works on bacteriology there is a tendency to urge modification of existing methods. Previous vaccination against the typhoid group of diseases invalidates the Widal Reaction as at present applied, and in communities where such vaccination is general,

newer and more complicated serological methods are of great value. In this country, however, refinement in the technique of the Widal Reaction hitherto applied would be of value only in those cases in which the patient's serum reacts with more than one organism of the group. In such circumstances a diagnosis of "Enteric Fever" may be made, but it is not possible in every case to state with certainty whether the disease is due to infection by *B. typhosus*, *B. paratyphosus A.* or *B. paratyphosus B.*

With a view to ascertaining in what proportion of cases this difficulty may arise under present circumstances a study has been made by Dr. Gibson of the results of all such routine examinations carried out in the University laboratories during the last three years. In all 428 specimens of serum have been examined and of these 103 were positive. Cross-agglutination occurred in 4 tests only, in one of which the infecting organism could be stated with certainty by a further agglutinin-absorption reaction.

It may be noted that the inability to state definitely which organism of the group is responsible does not prejudice the patient in any way. The information is, however, of importance from the epidemiological point of view.

The same strains of the typhoid-paratyphoid group have been used throughout and there appears to be no evidence that spontaneous variation in their serological constitution contributed to the production of these anomalous results. Rather it would seem that in these cases the strain of the infecting organism possessed the so-called group components which stimulated the production of antibodies for related bacteria. From the figures quoted this would seem to be a circumstance of some rarity. Our present experience suggests that an elaboration of the routine technique, requiring as it would a much greater quantity of serum than practitioners are at present accustomed to submit, would hardly be justified.

B. PARATYPHOSUS B. IN SEWAGE.

During the summer months of 1929 samples from all main sewers of the City were examined by selective cultural methods with a view to the isolation of organisms of the enteric group. During 1928 Dr. J. D. Allan Gray was successful in isolating *B. paratyphosus B.* from the sewage of the Corstorphine district and an attempt was made to ascertain whether this finding could be repeated in other districts of the City. This work was carried out by Drs. Begbie and Gibson.

In all 58 samples were taken, each from a main sewer and of these 7 yielded organisms identified as *B. paratyphosus B.* (Schottmüller) by direct agglutination and agglutinin-absorption tests. In five of the cases a positive result was obtained by the Brilliant-green enrichment method of Browning, Gilmour and Mackie. In the remaining two instances the direct plating method of Wilson enabled the paratyphoid bacillus to be isolated.

The areas drained by those sewers from which *B. paratyphosus B.* was isolated could be divided into two groups. Four sewers were associated with adjoining districts comprising the whole Leith area, while three drained an area represented by the Wards of Liberton, Newington, Duddingston and Craigmillar.

In order if possible to assess the significance of the finding of this specific organism in sewage a study was made of the incidence of *B. paratyphosus B.* infection in these districts and in the City as a whole during the years 1925-29 inclusive. It was found that the incidence of the disease in these two areas during the four years prior to 1929 was not markedly greater than in the remainder of the City having regard to the populations involved. On the other hand it was observed that areas in which outbreaks had occurred in previous years now gave negative results on examination of the sewage. It would seem probable that the residuum of chronic carriers left by such outbreaks would not in itself account for the massive discharge of organisms which renders their isolation from sewage possible.

In the year 1929 the Leith area mentioned was the locus of a considerable number of cases of the disease. The Newington, Liberton, Duddingston and Craigmillar area showed no corresponding high incidence of recognised paratyphoid fever.

In work of this kind where a single sample was examined from each sewer definite conclusions cannot be drawn, but the suggestion is put forward that the presence of organisms of the enteric group in sewage indicates a concentration of missed cases, convalescents and transient contact carriers in the general population. Such a circumstance may be found in association with or immediately following an outbreak of the disease. In a congested area where housing and social conditions favour contact-spread many cases may occur (exemplified by the Leith district). Under conditions of life as found in an upper-class suburban and semi-rural population such wide-spread dissemination of the organisms may not occur, a condition of affairs which might obtain in the southern residential district mentioned.

These circumstances in association with the fact that atypical mild and abortive cases of paratyphoid illness may readily escape detection would explain the rather divergent findings when an attempt is made to correlate case incidence with the occurrence of the specific organism in sewage.

FLOCCULATION TEST FOR SYPHILIS.

During the last three months of the year 47 specimens of serum were examined for the syphilis flocculation reaction by Drs. M'Lachlan and Gibson. These were submitted by the Clinical Officer in charge of the City Venereal Diseases Department. The tests were carried out by the technique which has been advocated by Professor Mackie and successfully applied by Dr. H. F. Watson (see *Edinburgh Medical Journal*, May 1927, p. 291). Use was made of an antigen of known constitution and sensitivity prepared according to a method devised by Dr. K. V. Krishnan while working in the University Bacteriology Department (see *Indian Journal of Medical Research*, Vol. XVII., 1929, p. 477). The standardisation of the antigen in this way constitutes a further improvement in the technique of the test.

The technique is simple, rapid in execution and reliable provided the serum used is fresh and carefully heated beforehand at 55°C. Employing as it does only two reagents the test is less susceptible to variability in results than the more elaborate Wassermann complement-fixation Reaction. It is of special value when small numbers of sera are dealt with at one time, and is economical in materials and labour.

It has been shown that this test gives results which are as accurate as those of the Wassermann reaction.

THE BACTERIOLOGICAL EXAMINATION OF THE WATER OF SWIMMING BATHS.

This investigation which was started in 1928 has been completed during the year by Dr. A. M. M. Grierson, Assistant Medical Officer of Health. The bacteriological examination of the water of Edinburgh swimming baths has shown that the system of emptying and filling the baths without filtration or chemical treatment of the water is not sufficient to maintain a reasonable standard of purity. For example the following results were obtained at one of the baths on the third day of use after refilling. The number of organisms present in 1 c.c. of water was 46,000 when grown in agar at 37°C. and 1,316,000 when grown in gelatin at 22°C. In addition B. coli was present in 0.1 c.c. and B. proteus, B. pyocyaneus, B. subtilis, Enterococci, and Streptococcus salivarius were also found in the water. In order that bathing may be carried out under the best possible hygienic conditions it is recommended that the baths should be fitted with a filtration plant which constantly filters and chlorinates the water. The report of the Ministry of Health on the Purification of the Water of Swimming Baths, published in August 1929 has already recommended this as the most effective method of maintaining clean water.

MEDICAL STAFF.

The medical staff of the University who took part in the bacteriological services of the City during 1929 were :—Dr. D. G. S. M'Lachlan and Dr. J. M. Alston, Lecturers ; Dr. R. S. Begbie and Dr. H. J. Gibson, Special Assistants ; Dr. J. D. Allan Gray (now Assistant Bacteriologist, City of Liverpool), Dr. Bryan Williams, and Dr. T. Gow Brown, Assistants.

The work was carried out under the direction of Professor T. J. Mackie.

MOTOR AMBULANCE SERVICE.

Three motor ambulance cars are provided for the conveyance of patients to the various hospitals.

The cars are specially equipped so as to ensure the maximum of comfort to the patient, and in addition to a day service the arrangements include the removal of urgent cases during the night.

DISINFECTION.

The disinfection of houses, etc., is carried out by a special staff attached to the Department.

The bedding and other infected articles are conveyed to the Disinfection Station in motor vans, and are there treated under high-pressure steam or formaldehyde gas.

Particulars as to the number of dwelling-houses disinfected during the last three years are given below.

	1927.		1928.		1929.	
	Number.	Apartments.	Number.	Apartments.	Number.	Apartments.
Dwelling-houses, etc. :—						
After Tuberculous Disease . .	1,079	1,337	1,037	1,264	1,008	1,367
,, other ,, . .	4,317	6,441	3,692	5,411	4,670	6,751

The following is a summary of the articles removed for disinfection during the year :—

Description.	No. of Articles.		Description.	No. of Articles.	
	After Tuberculous Disease.	After Other Diseases.		After Tuberculous Disease.	After Other Diseases.
Mattresses and Palliasses .	952	2,579	Body Clothes . . .	1,006	14,098
Blankets, Sheets, Quilts, etc.	3,532	10,676	Carpets and Rugs . .	4	415
Beds, Pillows, Bolsters, etc.	2,169	4,086	Miscellaneous . . .	246	1,183
Curtains, Table Covers, Wraps, etc. . . .	32	44	Destroyed by request .	363	175
Table Napery, Toilet Covers, Towels, etc. . .	96	314			
			Totals . .	8,400	33,570

DISINFECTION STATION.

Facilities are provided at the Disinfection Station for personal cleansing and for the treatment of scabies.

During the year 784 persons attended for baths and disinfection of clothing. Of these, 410 adults and 4 children were in a verminous condition, while 154 adults and 216 children were treated for scabies.

RECEPTION HOUSE.

The Reception House is always kept in readiness for any emergency. Fortunately it was not required during the year.

INTERMENTS.

(In terms of Section 60, Public Health (Scotland) Act, 1897.)

The Department was applied to in 62 instances where relatives of deceased persons represented their inability to meet the expenses of burial.

The usual inquiries were made regarding the *bona fides* of the applicants, and as a result, 6 of the applications were refused and 2 were withdrawn. In another 3 cases the deceased persons had been in receipt of an allowance from the Parish Council and that Authority became responsible for the burial. The remaining 51 funerals were provided by the Department.

The following statement shows the expenditure in connection with interments since 1914 :—

Year.	Number.	Total Cost of Interments and Removals.	Sums Recovered from Relatives.	Net Expenditure.
1914	101	£126 0 0	£5 1 3	£120 18 9
1915	71	128 13 0	10 5 11	118 7 1
1916	61	132 6 0	23 8 6	108 17 6
1917	61	141 6 0	16 6 8	124 19 4
1918	72	201 6 6	14 1 0	187 5 6
1919	63	177 12 0	33 8 9	144 3 3
1920	39	124 7 0	7 18 0	116 9 0
1921	54	190 2 6	26 19 2	163 3 4
1922	52	164 7 6	6 7 6	158 0 0
1923	51	168 18 6	9 10 0	159 8 6
1924	57	188 5 0	9 13 9	178 11 3
1925	45	151 0 0	11 8 0	139 12 0
1926	52	181 15 0	2 12 6	179 2 6
1927	54	177 15 0	22 8 0	155 7 0
1928	48	126 13 6	7 13 6	119 0 0
1929	51	153 3 6	17 18 5	135 5 1

HOSPITAL EXPENDITURE.

The following Table shows the cost per occupied bed per annum in Colinton Mains Hospital during the last sixteen years. The particulars apply in each case to the financial year to 15th May, and are based on the gross ordinary expenditure.

Year to 15th May.	Daily Average Number of Occupied Beds.	* Cost of Food.	† Cost of Maintenance.	Total Cost of Occupied Bed per annum.
1914	469	£21 12 6	£44 0 8	£65 13 2
1915	596	21 0 0	34 9 9	55 9 9
1916	557	24 8 11	36 15 9	61 4 8
1917	497	31 16 0	43 1 10	74 17 10
1918	471	37 14 8	47 10 9	85 5 5
1919	521	40 1 0	55 2 2	95 3 2
1920	585	39 10 4	59 0 0	98 10 4
1921	543	44 5 10	79 4 10	123 10 8
1922	538	32 11 5	74 3 6	106 14 11
1923	472	26 19 4	72 15 10	99 15 2
1924	397	30 17 5	86 3 2	117 0 7
1925	519	25 10 1	70 0 2	95 10 3
1926	430	29 17 6	84 19 6	114 17 0
1927	371	31 4 10	97 16 0	129 0 10
1928	393	30 9 9	87 5 9	117 15 6
1929	308	35 11 4	116 17 1	152 8 5

* Includes food for Staff.

† Includes salaries, heating, lighting, upkeep of buildings and grounds, taxes, etc.

The expenditure for provisions is detailed below :—

Butcher Meat	£2,323 9 11
Fish, Fowls, etc.	1,040 16 7
Butter, Cheese, and Bacon	1,272 3 10
Eggs	778 5 10
Groceries	1,327 16 7
* Milk	2,768 14 9
Bread	1,004 18 6
Oatmeal and Flour	118 7 6
Potatoes and Vegetables	272 18 6
Aerated Waters, etc.	66 14 0
	£10,974 6 0

* The total quantity was 30,198 gallons, an average of 82 gallons per day, equal to 2⅛ pints per head per day.

The total cost of stimulants for the year amounted to £36, 5s. 10d., as against £34, 12s. 8d. in 1928, and was expended as follows :—

Diphtheria Patients	£1 12 7
Scarlet Fever Patients	2 7 7
Whooping Cough Patients	1 15 3
Measles Patients	2 4 4
Enteric ,,	4 10 3
Phthisis ,,	10 6 6
Erysipelas ,,	3 12 6
Other Diseases	9 16 10
	£36 5 10

The cost of serum during the year amounted to £1,126, 6s.

PILTON HOSPITAL AND ROYAL VICTORIA HOSPITAL.

Cost per Occupied Bed—Year to 15th May 1929.

	Daily Average Number of Occupied Beds.	* Cost of Food.	† Cost of Maintenance.	Total Cost of Occupied Bed per annum.
Pilton Hospital	121	£31 16 4	£72 19 9	£104 16 1
Royal Victoria Hospital	68	35 18 11	85 11 2	121 10 1

* Includes food for Staff.
† Includes salaries, heating, lighting, upkeep of buildings and grounds, taxes, etc.

PUBLIC HEALTH EXPENDITURE.

1908-1929.

Year.		Gross Expenditure.	Revenue.	Net Expenditure.
1907-8		£34,295	£601	£33,694
1908-9		34,218	690	33,528
1909-10		35,159	699	34,459
1910-11		34,869	718	34,150
1911-12		35,072	780	34,291
1912-13	T.B. Scheme begun.	37,618	2,690	34,927
1913-14		46,094	14,548	31,546
1914-15		56,768	18,716	38,051
1915-16		56,827	12,997	43,829
1916-17	C.W. Scheme begun.	58,323	23,216	35,107
1917-18		75,198	30,552	44,645
1918-19	V.D. Scheme begun.	99,563	43,029	56,533
1919-20		130,877	49,138	81,738
1920-21	Amalgamation with Leith.	210,875	89,098	121,777
1921-22		184,315	68,450	115,865
1922-23		146,395	67,477	78,917
1923-24		149,873	47,554	102,319
1924-25		156,155	48,949	107,206
1925-26		156,919	54,185	102,734
1926-27		157,895	56,439	101,455
1927-28		* 172,763	56,999	* 115,764
1928-29		* 177,008	60,512	* 116,496

* Includes Interest and Debt Charges.

MATERNITY AND CHILD WELFARE.

The following Report in connection with Child Welfare has been prepared by Dr. T. Y. Finlay, who is in charge of this branch of the Department :—

I have the honour to submit a report of the work under the Maternity and Child Welfare Scheme during the year 1929.

For descriptive details of the various activities of the scheme referred to in the following Tables of figures last year's annual report should be consulted.

BIRTHS.

The number of births registered in the City during the year was 7,855. Of these, 4,021 were males and 3,834 females, being in the proportion of 105 boys to every 100 girls. The number of illegitimate births was 724, or 9·2 per cent., as compared with 663 or 8·3 per cent. for the previous year.

Quarter.	Number of Births Registered.	Sex.		Legitimate.	Illegitimate.	Percentage of Illegitimate to Total Births.
		Males.	Females.			
1st .	1,937	1,034	963	1,823	174	8·7
2nd .	2,040	1,018	1,022	1,841	199	9·7
3rd .	1,976	1,016	960	1,793	183	9·3
4th .	1,842	953	889	1,674	168	9·1
Totals	7,855	4,021	3,834	7,131	724	9·2

The following Table gives particulars regarding the births after the necessary corrections have been made for transfers :—

Quarter.	Total Births.	Legitimate.	Illegitimate.	Percentage of Illegitimate to Total Births.
1st .	1,881	1,748	133	7·1
2nd .	1,902	1,746	156	8·2
3rd .	1,803	1,685	118	6·6
4th .	1,718	1,592	124	7·3
Totals	7,304	6,771	531	7·3

Illegitimate Births.—The percentage of illegitimate births to the total corrected births for the year was 7·3, a figure which has scarcely varied since 1921. Previous to this the percentage had been gradually getting less since 1918, when it stood at 11·7.

Birth-rate.—The birth-rate based on the corrected number of births is equivalent to 17·1 per 1,000 of the estimated population, compared with 17·3, the rate for 1928.

In the following Table the births are allocated according to the three areas of the extended City. The births belonging to military quarters, and those occurring in institutions, for which no permanent domicile could be ascertained, are shown under separate headings. Fuller details regarding the distribution of the births in the various Wards of the City will be found in the Table on page 11.

Area.	Births.	Rate per 1000 of Population.
Edinburgh	5,085	16·5
Leith	1,626	20·5
Suburban	390	13·4
Institutions	146	....
Military Quarters . . .	57	....
Whole City	7,304	17·1

Below are given the corrected birth-rates for the eight large towns in Scotland, and for the whole of Scotland for 1929.

Town.	Per 1000 of Population.	Town.	Per 1000 of Population.
Glasgow	21·2	Paisley	20·5
Edinburgh	17·1	Greenock	22·2
Dundee	20·9	Motherwell and Wishaw	20·2
Aberdeen	19·7	Clydebank	20·6

SCOTLAND . . 19·0

Notification of Births.—The number of births notified during the year was 8,367. Of this total, 7,520 were stated to be born at term, and 439 to be premature ; 408 were still-born.

An Analysis of the 8,367 births notified during the year shows the following results :—

I.	Births attended by Private Doctors		2003
II.	Births attended by Private Doctors with a District Nurse—		
	(1) Queen's Nurses	1202	
	(2) Buccleuch Street Nurses	204	
			1406
III.	Births attended by Registered Midwives		468
IV.	Births attended by Students and Pupil Nurses in their own homes—		
	(1) Royal Maternity Hospital	936	
	(2) Elsie Inglis Memorial Hospital	228	
	(3) Cowgate Dispensary	336	
	(4) Deaconess Hospital	80	
	(5) Edinburgh Lying-in Institution	123	
			1703
V.	Births attended in Maternity Hospitals and Training Centres—		
	(1) Royal Maternity Hospital	1845	
	(2) Elsie Inglis Memorial Hospital	806	
	(3) Deaconess Hospital	7	
	(4) Edinburgh Lying-in Institution	66	
	(5) Craiglockhart Poorhouse	63	
			2787
			8367

As already stated the still-births notified during the year numbered 408—an increase of 51 when compared with last year.

The following Table gives an analysis of comparable figures in percentages of the births for the past five years :—

	1925.	1926.	1927.	1928.	1929.
Births attended by—					
Private Doctors / Private Doctors with a District Nurse	Per cent. 48	Per cent. 41	Per cent. 43	Per cent. 43	Per cent. 49
Registered Midwives	6	5	6	5	5
Students and Pupil Nurses in Patient's Home	23	24	22	22	18
In Maternity Hospitals and Training Centres	23	30	29	30	28
	100	100	100	100	100

Infant Mortality.—The deaths of infants under one year registered during 1929 numbered 581, which is 28 more than those recorded for the previous year. The mortality rate was equivalent to 80 deaths per 1,000 births.

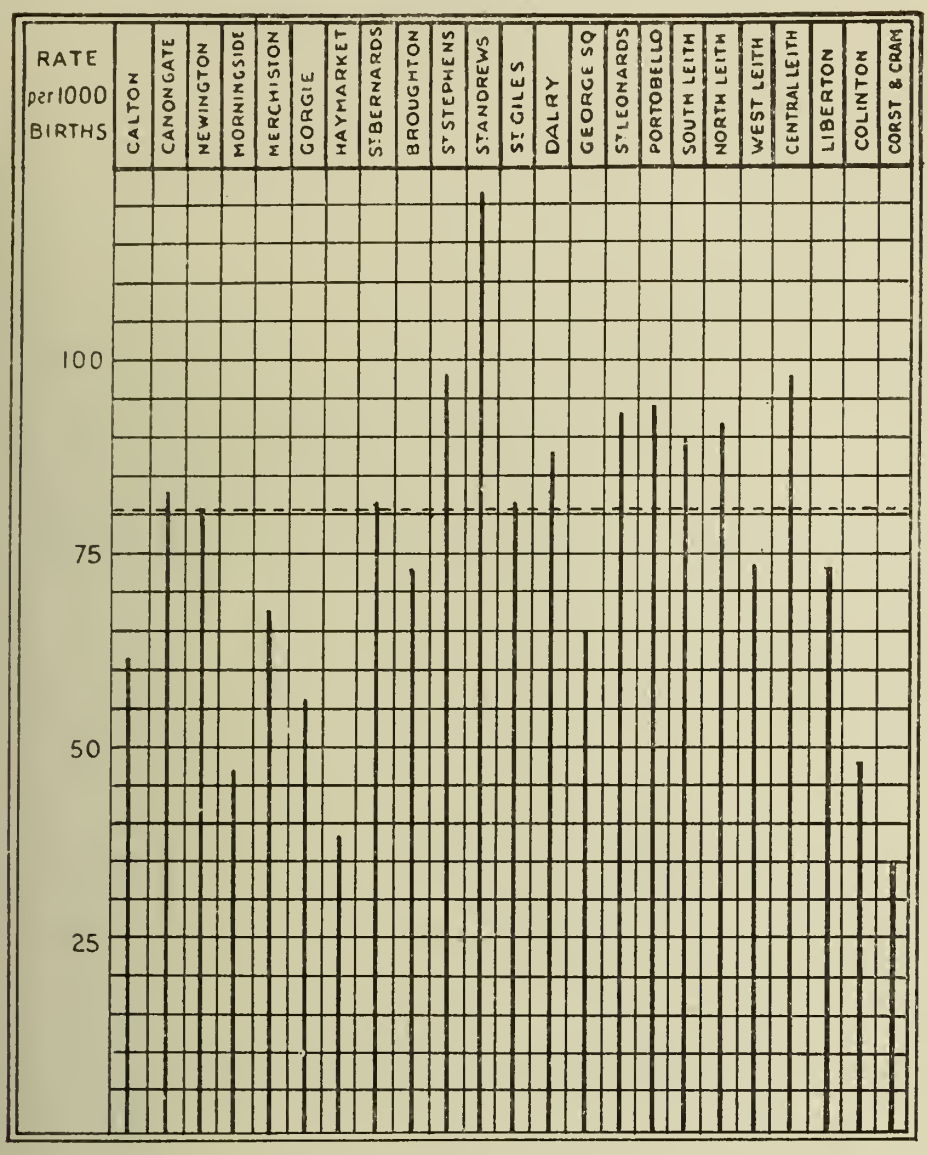
The following figures show the distribution of the deaths under one year in the different districts of the City, together with the mortality rate for the respective areas :—

Area.	Deaths under 1 year.	Deaths per 1000 Births.
Edinburgh . . .	397	78
Leith	144	89
Suburban . . .	21	54
Institutions . . .	18	...
Military Quarters . .	1	...
Whole City . .	581	80
Figures for 1928 . .	553	75

In the Table on page 11 the infantile mortality is tabulated according to Wards, while the diagram on page 61 shows the mortality experienced in each Ward as compared with the rate for the City.

[Diagram.

INFANTILE MORTALITY.—Deaths per 1000 Births.



The Table given below shows the Infantile Mortality rates for the City since 1880:—

Year.	Infantile Mortality.	Year.	Infantile Mortality.		Year.	Infantile Mortality.	
1880	143	1896	122		1913	101	
1881	128	1897	164		1914	110	
1882	121	1898	141	Sanitary Dept. formed, 1898	1915	132	
1883	128	1899	147		1916	100	
1884	135	1900	132		1917	123	Child Welfare Department formed, May 1917
1885	120	1901	143		1918	94	
1886	136	1902	119		1919	117	Reflection world Influenza Epidemic, 1918–1919
1887	137	1903	117		1920	89	
1888	128	1904	125		1921	96	
1889	133	1905	124		1922	91	
1890	144	1906	112		1923	82	
1891	138	1907	121		1924	89	
1892	135	1908	114	Voluntary Visiting in Homes	1925	96	
1893	148	1909	113		1926	80	
1894	125	1910	103		1927	80	
1895	152	1911	115		1928	75	Four Medical Assistants Appointed, May 1928
		1912	110		1929	80	

Causes of Death among Children under Five Years during 1929.

Cause of Death.	Under 1 Week.	1, and under 2 Weeks.	2, and under 3 Weeks.	3, and under 4 Weeks.	Total under 4 Weeks.	4 Weeks and under 3 Months.	3, and under 6 Months.	6, and under 9 Months.	9, and under 12 Months.	Total under 12 Months.	12 Months and under 2 Years.	2, and under 3 Years.	3, and under 4 Years.	4, and under 5 Years.	Total 1-5 Years.	To un 5 Y
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Chickenpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	3	...	...	3	
Whooping Cough	...	...	...	...	...	3	3	4	7	17	14	3	2	2	21	3
Diphtheria and Croup	...	...	...	...	...	1	...	...	2	3	9	6	14	6	35	3
Erysipelas	...	...	1	...	1	1	...	...	...	2	...	...	...	...	...	
Tuberculous Meningitis	...	...	...	...	...	...	...	2	1	3	8	4	4	3	19	2
Abdominal Tuberculosis	...	...	...	...	...	...	...	1	2	3	3	...	...	...	3	
Other Tuberculous Disease	...	...	...	...	...	...	2	...	1	3	5	1	1	2	9	1
Meningitis (not Tuberculous)	...	...	...	...	...	3	2	...	...	5	3	1	...	3	7	1
Hydrocephalus	...	...	...	...	...	...	...	...	3	3	...	...	...	...	...	
Convulsions	5	...	1	1	7	7	6	3	...	23	4	...	...	...	4	
Pneumonia (all forms)	3	5	1	1	10	19	25	29	28	111	67	22	8	6	103	21
Bronchitis	...	2	...	2	4	7	8	1	2	22	7	2	...	1	10	
Laryngitis	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	
Diarrhœa and Enteritis	...	...	5	...	5	14	10	10	8	47	3	1	1	2	7	
Other Digestive Diseases	2	...	...	...	2	3	5	2	2	14	3	3	2	...	8	
Congenital Malformations	7	6	...	...	13	6	2	...	...	21	...	1	...	...	1	
Congenital Heart	8	1	1	1	11	...	...	...	...	11	...	...	...	...	...	
Premature Birth	100	13	6	6	125	6	1	...	...	132	...	...	...	...	...	1
Atrophy, Debility, and Marasmus	16	2	6	1	25	15	12	3	...	55	...	...	...	...	...	
Atelectasis	5	...	...	...	5	...	...	...	...	5	...	...	...	...	...	
Injury at Birth	19	...	1	...	20	...	...	...	...	20	...	...	...	...	...	
Suffocation, overlaying	...	...	...	...	...	...	1	1	...	2	...	...	...	...	...	
Syphilis	2	...	2	1	5	1	1	...	...	7	...	...	...	...	...	
Rickets	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
All other Causes	15	...	4	2	21	6	21	19	4	71	23	14	12	8	57	1
Totals	182	29	28	15	254	92	100	75	60	581	149	61	44	33	287	

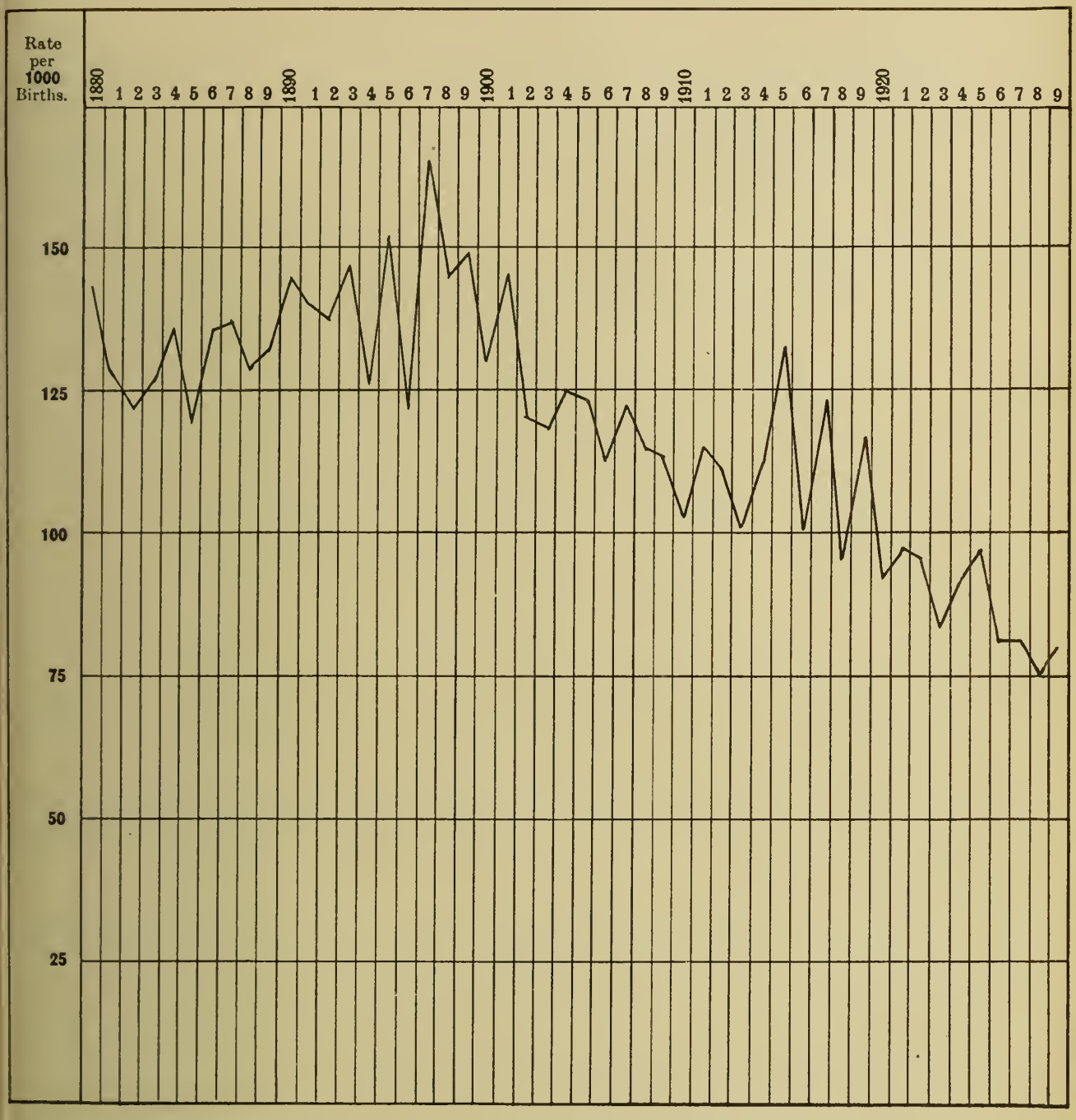
Causes of Death among Illegitimate Children under Five Years during 1929.

Cause of Death.	Under 1 Week.	1, and under 2 Weeks.	2, and under 3 Weeks.	3, and under 4 Weeks.	Total under 4 Weeks.	4 Weeks and under 3 Months.	3, and under 6 Months.	6, and under 9 Months.	9, and under 12 Months.	Total under 12 Months.	12 Months and under 2 Years.	2, and under 3 Years.	3, and under 4 Years.	4, and under 5 Years.	Total 1-5 Years.	T un Y
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Chickenpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Whooping Cough	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diphtheria and Croup	...	...	...	...	...	...	...	...	2	2	1	1	...	...	2	
Erysipelas	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Abdominal Tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Other Tuberculous Disease	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	
Meningitis (not Tuberculous)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Hydrocephalus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Convulsions	...	...	...	...	...	2	1	1	...	4	...	...	...	...	...	
Pneumonia (all forms)	...	...	...	...	...	1	4	2	2	9	5	...	1	...	6	
Bronchitis	...	1	...	...	1	...	...	...	...	1	...	...	...	...	...	
Laryngitis	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	
Diarrhœa and Enteritis	...	...	...	...	...	6	1	4	...	11	1	...	...	...	1	
Other Digestive Diseases	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	
Congenital Malformations	1	1	...	...	2	...	...	...	...	2	...	...	...	...	...	
Congenital Heart	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Premature Birth	12	1	1	2	16	...	...	...	...	16	...	...	...	...	...	
Atrophy, Debility, and Marasmus	2	...	...	...	2	5	7	...	...	14	...	...	...	...	...	
Atelectasis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Injury at Birth	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	
Suffocation, overlaying	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Syphilis	1	...	1	...	2	...	...	...	...	2	...	...	...	...	...	
Rickets	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
All other Causes	2	...	...	...	2	3	2	1	1	9	3	...	...	1	4	
Totals	19	3	2	2	26	18	16	8	5	73	12	1	1	1	15	

EDINBURGH

INFANTILE MORTALITY

1880-1929.



In the accompanying Table the deaths of illegitimate children are arranged to show the Ward in which their domicile was situated.

Calton	2	George Square	4
Canongate	3	St. Leonard's	10
Newington	7	Portobello	9
Morningside	...	South Leith	4
Merchiston	1	North Leith	6
Gorgie	1	West Leith	5
Haymarket	3	Central Leith	6
St. Bernard's	1	Liberton	...
Broughton	1	Colinton	2
St. Stephen's	2	Corstorphine and Cramond	2
St. Andrew's	3	Institutions (not allocated in Wards)	8
St. Giles	5		
Dalry	3	Total	88

The number of illegitimate children, up to five years, who died in Institutions is shown in the following Table.

City Hospital	7
Sick Children's Hospital	20
Deaconess Hospital	...
Royal Maternity Hospital	9
Elsie Inglis Memorial Hospital	1
Craiglockhart Poorhouse	18
Leith General Hospital	3
East Pilton Hospital	1
Private Nursing Home	1
Total	60

Great care is exercised in the supervision of the **illegitimate infant,** a special register being kept for the purpose.

Neonatal Death-rate.—In the following table the deaths under one year have been tabulated to show various important causes of death :—

FOUR CHIEF CAUSES OF DEATH OCCURRING IN THE NEONATAL PERIOD.

(Rate per 1000 Births.)

	1925.	1926.	1927.	1928.	1929.
Congenital Malformations	5·4	4·9	5·1	3·6	4·3
Injuries at Birth	1·4	2·3	2·4	3·0	2·7
Prematurity	18·1	14·6	18·5	14·9	18·0
Atrophy, Debility and Marasmus	8·6	11·3	9·4	7·2	7·5

Most of these conditions, it may be assumed, are such as should be beneficially influenced by ante-natal and natal care.

Maternal Deaths.—The total number of maternal deaths which occurred in the City during the year was 87, showing an decrease of 2 compared with the previous year. Of the 87 deaths 38 were of women who had come to the City for their confinement,

and their deaths have been transferred to the district of permanent residence. Two deaths occurring outside the City were transferred to Edinburgh as the district of permanent residence, giving a total of 51 deaths of Edinburgh citizens, to which the following details refer.

Ages at Death—

Under 20 years	1	1·9	per cent. of the total.
20 years and under 25 years	10	19·7	,, ,, ,,
25 years and under 30 years	12	23·5	,, ,, ,,
30 years and under 35 years	15	29·5	,, ,, ,,
35 years and under 40 years	11	21·5	,, ,, ,,
40 years and under 45 years	2	3·9	,, ,, ,,
45 years and under 50 years	0	0·0	,, ,, ,,
Total	51	100·0	

Causes of Death—

Septicæmia.

Puerperal Sepsis	18*	
Puerperal Sepsis complicated by influenza	1	
	—	19

Toxæmia.

Albuminuria	1	
Eclampsia	9	
Hyperemesis	1	
Acute Yellow Atrophy	1	
	—	12

Hæmorrhage.

Antepartum Hæmorrhage	3	
Postpartum Hæmorrhage	5	
Placenta Prævia	1	
	—	9

Conditions complicating Labour.

Pneumonia	2	
Organic Heart Disease	2	
Gastric Ulcer	1	
	—	5

Embolism.

Number of Deaths	2	
	—	2

Unclassified Various Causes.

Shock	1	
Ruptured Uterus	1	
Mesenteric Thrombosis	1	
Abortion	1	
	—	4

Total	51

* Includes 2 deaths transferred from another district.

Maternal Deaths, 1929.	Septicæmia.	Toxæmia.	Hæmorrhage.	Embolism.	Illnesses complicating Labour.	Unclassified Causes. Various.	Totals.
Cases attended by—							
Private Doctors and died at home	1	0	2	2	0	0	5
Private Doctors and removed to Institutions.	8	8	1	0	1	0	18
Midwives and removed to Institutions	0	0	0	0	0	0	0
Dispensaries and Pupil Nurses and removed to Institutions	2	0	1	0	0	1	4
Dispensaries and Pupil Nurses at home	1	0	2	0	0	0	3
In Institutions	7	4	3	0	4	3	21
Totals	19	12	9	2	5	4	51

Maternal Deaths, 1925-29.	1925.	1926.	1927.	1928.	1929.
Cases attended by—	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Private Doctors and died in their own homes	21	26	11	14	10
Private Doctors and removed to Institutions	16	10	25	23	35
Midwives and removed to Institutions .	5	12	0	3	0
Dispensaries and Pupil Nurses and removed to Institutions	9	12	9	17	8
Dispensaries and Pupil Nurses at home .	2	2	4	0	6
In Institutions	47	38	51	43	41
	100	100	100	100	100

In the above Table it will be noticed that, from the year 1927, the percentage of patients attended by private doctors and who died in their own homes is more comparable to that of the previous years in the case of those removed to institutions, and vice versa. It is possible that the general stoppage of work which took place in 1926 may have some bearing upon this curious sudden transposition of figures.

Midwives Act.—Report for the year in terms of the Midwives (Scotland) Act, 1915 :—

1. The number of certified Midwives who intimated to the Local Authority their intention to practice in the district	13
2. (*a*) Total number of Births	7855
(*b*) Total number of Deaths of New-born Children (within 10 days) .	222
(*c*) Actual number of Births attended by Midwives	468
(*d*) Deaths of New-born Children occurring in the practice of Midwives .	0
(*e*) Number of Births not attended by a Doctor or Midwife . . .	0
3. (*a*) Total number of cases of Ophthalmia Neonatorum	29
(*b*) Actual number of cases of Ophthalmia Neonatorum occurring in the practice of Midwives	1
(*c*) Actual number of cases occurring where confinement not attended by a Doctor or Midwife	0
4. (*a*) Total number of cases of Puerperal Sepsis	131
(*b*) Total number of Deaths from Puerperal Sepsis	21*
(*c*) Actual number of cases of Sepsis in practice of Midwives . . .	0
(*d*) Actual number of Deaths from Puerperal Sepsis in practice of Midwives .	1
(*e*) Actual number of cases occurring where confinement not attended by a Doctor or Midwife	0
5. (*a*) Total number of Still-births	408
(*b*) Actual number of cases of Still-births occurring in the practice of Midwives .	13
6. Cases of Emergency	15

* Includes 4 deaths transferred to other districts and 1 death complicated with Influenza.

The total number of cases of emergency in which medical practitioners have been called in, under Section 22 of the Act, during 1929 was 15 as noted in the following classified list.

Delayed labour	9
Placenta Prævia	1
Ante-Partum hæmorrhage	1
Still-births	3
Inflammation of the eyes	1
Total . . .	15

Visiting in the Home.—Visits are paid in the home for general supervision by the Health Visitor, and where she considers it necessary for a doctor to be in attendance and the parents are unable to provide one, the case is visited by one of the assistant medical officers from the Department. During the past year 6,164 infants under one year of age were kept under supervision and these received 39,764 visits in all; 48,818 visits were paid to children between 1 and 5 years of age, 706 of which were visited for the first time at this age period. In addition 3,243 special visits were paid to 1,776 expectant mothers. During the same period the assistant Medical Staff were called upon to pay 3,124 first visits and followed these up with a total of 1,668 subsequent visits.

Regular fortnightly visits of a social character are paid by a willing band of voluntary workers, details of whose visits and many other activities are published in an Annual Report separately issued by them and which can be had on application to the Child Welfare Department.

In the following Table particulars are given regarding the number of **Ante-natal Clinics** held during the year, together with the attendances at the respective Centres.

Centre.	Number of Clinics held.	Attendances.		
		New Cases	Old Cases.	Total.
Cowgate	98	512	885	1,397
Torphichen Street	52	42	151	193
Marshall Street	49	47	170	217
Royal Maternity Hospital	364	1,974	7,672	9,646
Leith	51	273	205	478
Elsie Inglis Memorial Hospital	161	1,106	3,624	4,730
Totals	775	3,954	12,707	16,661
Figures for 1928	782	3,636	11,180	14,816

In the following Table particulars are given regarding the number of **Post-natal Clinics** held during the year, together with the attendances at the respective centres.

Centre.	No. of Clinics held.	Attendances.
Royal Maternity Hospital	52	912
Elsie Inglis Memorial Hospital	81	980
Torphichen Street Dispensary	47	98
Totals	180	1990

There are thirteen Infant Welfare Centres for the following work:—

Preventive Clinics.—These are held for the prevention and correction of dietetic errors and minor ailments. The undernoted figures will give an indication of their scope.

Centre.	Number of Clinics held.	New Cases.			Total Attendances.		
		Under 1 year.	Over 1 year.	Total.	Under 1 year.	Over 1 year.	Total.
Gorgie	88	150	62	212	1,553	1090	2,643
Torphichen Street	97	209	46	255	2,266	1,872	4,138
High Street	101	146	11	157	2,059	2,157	4,216
Pleasance	133	271	53	324	3,699	2,733	6,432
Windsor Street	47	149	85	234	1,461	627	2,088
Stockbridge	92	210	60	270	2,290	1,501	3,791
* Marshall Street	49	119	47	166	1,148	383	1,531
* Elsie Inglis Memorial Hospital	144	302	163	465	2,099	918	3,017
Totals	751	1,556	527	2,083	16,575	11,281	27,856
Figures for 1928	815	1,625	477	2,102	16,717	13,162	29,879

* These Dispensaries receive a grant from the Corporation.

The following Table shows the number of **Curative Clinics** held at the various Centres and Dispensaries, with the total attendances at each.

Centre.	Number of Clinics held.	Attendances.		
		Old Cases.	New Cases.	Total.
* Cowgate	96	2,639	348	2,987
Gorgie	50	350	141	491
* Torphichen Street	48	242	186	428
High Street	41	1165	43	1,208
* Marshall Street	47	297	109	406
Portobello	97	2,404	212	2,616
* Richmond Street	46	1.340	172	1,512
* Riego Street	53	995	117	1,112
Leith	99	2,065	1,542	3,607
* Elsie Inglis Memorial Hospital	119	1,890	432	2,322
Totals	696	13,387	3,302	16,689
Figures for 1928	675	11,853	2,585	14,438

* These Dispensaries are subsidised by the Corporation, the clinics being conducted by doctors on the regular staffs of the Dispensaries.

The following Table gives the statistical facts in relation to the **Ultra Violet Ray Therapy** carried on during the past year.

Centre.	Number of Cases.	Number of Exposures given.	
		M.V. Lamp.	C.A. Lamp.
Leith	97	1,184	...
Pleasance (forenoon clinics)	138	1,168	1,172
,, (afternoon clinics)	132	417	2,475
Totals	367	2,769	3,647

The type of cases dealt with were mainly those suffering from active rickets, general debility, and children convalescent from pneumonia, measles, and whooping cough. As the result of careful selection of suitable cases the general improvement of the children has been obvious—especially so has this been the case with a small number of intractable eczemas of the head and scalp which, with very limited exposures, have entirely cleared up and so far have not threatened to break out again.

The accompanying Table shows the attendances at each of the four Day Nurseries :—

Day Nursery.	Attendances—Infants.	Attendances—Children.	Total Attendances.
Danube Street	1,199	2,372	3,571
Dumbiedykes Road	2 114	5,185	7,299
Grove Street	1,316	3,267	4,583
South Fort Street, Leith	2,144	6,526	8,670
Totals	6,773	17,350	24,123
Figures for 1928	4,794	15,595	20,389

At the Leith Day Nursery, four or five cots are set apart for the reception of healthy children whose mothers have to enter an hospital for treatment. In many cases it is impossible for the parents to make adequate arrangements for the care of the younger members of the family during the mother's absence. In such circumstances the children are kept in residence at the Nursery day and night until the mother returns to her home.

The following figures represent the attendances at the thirteen **Toddler Play Centres.**

Centre.	Number on Roll.	Daily Attendance.	Centre.	Number on Roll.	Daily Attendance.
Fountainbridge .	82	36	Fishmarket Close .	40	30
High Street . .	78	50	Central Halls .	61	30
Pleasance . .	50	42	Leith (2 Centres) .	131	120
Stockbridge . .	51	35	Barony Street .	50	30
Cowgate . .	43	23	Chessel's Court .	20	14
High School Yards .	24	17	Portobello . .	29	20
			Totals .	659	447

The distribution of **milk and dinners** during the year was as follows :—

Milk—Assisted	72,277½ pints.
Free	350 ,,
Dinners—Assisted	15,546
Free	40

During the year there were no epidemics of **measles** or **whooping cough.** The number of notifications of measles was 338, and 45 were removed to hospital. No deaths occurred during the year from this condition. The number of notifications of whooping cough was 863, and of these 113 were removed to hospital. Thirty-nine deaths from this disease were recorded during the year. Particulars of these 39 deaths are shown in the following Table :—

Cause of Death.	Age Periods.			Totals.
	-1.	1-5.	Over 5 Years.	
Whooping Cough	4	2	...	6
,, ,, with Pneumonia .	10	13	...	23
,, ,, ,, Bronchitis .	1	2	...	3
,, ,, ,, Other Causes .	2	4	1	7
Totals . .	17	21	1	39

Ophthalmia Neonatorum.—During the year 29 cases of this disease were notified. The interval in days between the birth of the child and the onset of the disease was as follows :—

Days .	1	2	3	4	5	6	7	8	9	10	Over 10 days and under 3 months.	No Particulars.	Total.
Cases .	6	1	2	1	...	...	...	8	...	4	3	4	29

The Confinement was attended by :—

A Doctor and Nurse	8 cases.
Nurses from Institutions	5 cases.
By Dispensaries	3 cases.
In Institutions	10 cases.
Midwives	3 cases.—Total, 29 cases.

Treatment was given :—

At Home	12 cases.
At Home and Welfare Centres	3 cases.
In Hospital	14 cases.—Total, 29 cases.

Hospital treatment was given :—

In Pilton Hospital	11 cases.
In Leith General Hospital	1 case.
Elsie Inglis Memorial Hospital	1 case.
Royal Infirmary	1 case.—Total, 14 cases.

A Queen's Jubilee Nurse or a Nurse from the Royal Maternity Hospital attended to those children who were treated in their homes. The Health Visitor paid 76 special follow-up visits.

In all cases the eyes were cleared.

The number of Institutions registered as Maternity Homes under the general supervision of the Local Authority is 32. This figure, which includes the two large Maternity Hospitals in the City, shows an increase of 3 compared with the number registered in 1928.

There are two homes for the reception of unmarried mothers, before and after confinement, which receive annual grants from the Corporation.

(1) **Edinburgh Home for Mothers and Babies,** which during the year had 28 girls in residence, of whom 18 were new admissions, also 22 babies of whom 17 were admitted during the year. The average stay of the girls and babies was $4\frac{1}{2}$ months. The average age of the babies on discharge was 5 months.

(2) **Bonnington Bank Home for Mothers and Infants,** on the 1st January had in residence 20 mothers (including expectant mothers) and 14 babies. During the year there were admitted 36 mothers and 19 babies, and there passed out during the year 34 mothers and 19 babies. On the last day of the year 22 mothers and 14 babies were resident in the Home.

Treatment of cases suffering from debility and malnutrition is undertaken at **Victoria Park House,** where on the 1st January 1929 there were 21 infants in residence. Added to this number there were admitted during the year 133 cases, making a total of 154 infants and children of pre-school age treated in 1929. The average daily occupation was 20·3 cases.

The Home for Babies at Polwarth Terrace, which receives an annual grant, had 14 infants in residence on the 1st January 1929, and during the year 11 new cases were admitted. The comparable figures for the Annexe at 3 Forbes Road were 7 and 9 respectively.

During the year 21 mothers and 18 infants were sent and paid for by the Corporation to the **Duddingston Hawthorn Brae Convalescent Home** for mothers and nursing infants.

To **Humbie Children's Village** 160 toddler children between the ages of 3 and 5 years were sent and paid for during the year and remained for a period of between 3 and 4 weeks.

Leadburn Home for Tired Mothers and **Providence House, Kinghorn,** both accept cases recommended by the Department but receive no subsidy.

Mothercraft Classes have again been held during the year with the usual successful results. Two hundred mothers attended the classes, of whom 78 entered the competition for the Hutchison Silver Shield for their respective Welfare Centres.

The **Special Demonstrations in Cookery** have again been given by Miss Gilmour with conspicuous success and benefit to those attending. This year classes were held at the following places :—Windsor Street, High Street, Pleasance, Freer Street, Prestonfield and at the Toddlers' Play Centre, Leith.

The following figures are given in connection with the **Public Health (Notification of Puerperal Fever and Puerperal Pyrexia) Regulations (Scotland), 1929** :—

Total number of cases of puerperal fever . .	131
„ „ „ „ „ puerperal pyrexia . .	35 (Oct./Dec.)
Total number of deaths	21

Number of cases of puerperal fever and puerperal pyrexia where assistance was provided :—

1. Consultant	2 cases.
2. Bacteriological examination	1 case.
3. Hospital treatment	116 cases.

I take this opportunity of tendering my sincere thanks to all those who, in many ways, by their co-operation and help, have assisted me in carrying on the work of the Department on behalf of mother and child life in the City.

I have. Sir, the honour to remain,

Your obedient Servant,

T. Y. FINLAY, M.D., F.R.C.P.(Ed.).

VENEREAL DISEASES.

The following Report in regard to the Venereal Diseases Scheme has been prepared by the Clinical Medical Officer :—

I have the honour to submit to you a Report of the work carried out during the year 1929 under the Venereal Diseases Scheme.

New Patients.

During the year 5,913 new patients were examined, the numbers reporting at the various centres being as follows :—

	Men.	Women and Children.	Total.
Royal Infirmary	2,584	973	3,557
Subsidiary Clinics	33	268	301
Bruntsfield Hospital and Elsie Inglis Hospital and Dispensaries ...	...	719	719
Royal Maternity Hospital	...	987	987
Seamen's Dispensary, Leith	349	...	349
Totals	2,966	2,947	5,913

These figures represent new cases only, the number of which shows a decrease of 156 from 1928. In addition to the 5,913 new cases, a further number, approximately 3,500 cases, who had not completed their treatment, were carried over from the previous year. During the year, therefore, 9,000 cases were under treatment.

Of the 5,913 new patients reporting for diagnosis 1,423 (25%) were proved to have syphilis ; 2,000 (33%) suffered from gonorrhœa ; 174 (3%) from soft sore ; 109 (2%) had mixed infection ; and in 2,207 (37%) no evidence of venereal disease was found after the patient had been submitted to a series of tests over a period of time sufficiently prolonged to make it certain that there was no disease.

In-patients.

In-patient treatment was required in over 600 cases ; this number does not include patients who were treated at the Maternity Hospitals. The total number of in-patients and the institutions in which they received treatment is indicated in the following Table :—

	Men.	Women and Children.	Total.
Royal Infirmary	219	130	349
Subsidiary Hospital	....	140	140
Bruntsfield Hospital and Elsie Inglis Memorial Hospital . . .	....	216	216
Royal Maternity Hospital . . .	....	274	274
Totals . .	219	760	979

Out-patient Attendances.

The number of attendances of out-patients was as follows :—

Royal Infirmary, Males	78,032
,, ,, Females	25,019
Subsidiary Clinics	2,340
Bruntsfield Hospitals and Dispensaries . . .	7,877
Royal Maternity Hospital	2,511
Seamen's Dispensary, Leith	12,847

The aggregate total of attendances is thus 128,626 ; 90,879 by male patients, and 37,747 by women and children.

There is a slight decrease both in the number of attendances and in the number of patients. In the two larger centres, the male and female departments of the Royal Infirmary, the average daily attendances were 250 in the former and 82 in the latter. The slight decrease in the number of attendances, as stated in a previous report is largely due to the number of non-venereal cases. These cases do not require the prolonged observation and treatment of infected patients.

Non-Venereal Cases.

The following figures are instructive and show the large number of patients who come to hospital to have their condition investigated, and in whom after careful tests, no evidence of venereal infection is found.

Year.	Males.	Females.	Total.
1924 . . .	491	236	727
1925 . . .	680	467	1,147
1926 . . .	849	583	1,432
1927 . . .	1,007	939	1,946
1928 . . .	1,199	1,163	2,362
1929 . . .	1,179	1,028	2,207

Comparative Figures.

The next Table shows the number of new cases and the annual number of attendances for treatment since the inception of the scheme :—

Year.	New Patients.	Attendances.
1919	2,117	13,200
1920	3,383	73,032
1921	3,409	93,503
1922	3,250	95,383
1923	3,579	92,912
1924	3,861	106,456
1925	4,428	114,873
1926	5,086	113,849
1927	5,542	133.324
1928	6,069	132,834
1929	5,913	128,626

Incidence and Types of Disease.

It is interesting to note the prevalence of the various forms of the disease from year to year.

Acquired Syphilis.

From 1920 to 1926, there was a considerable amount of evidence to show that fresh cases of syphilis were on the decrease ; for the last three years, however, there have been definite signs of an increase of acquired syphilis. In analysing the cases of syphilis seen during the year under review, it was found that 22 per cent. reported in the sero-negative stage, and a further 22 per cent. were cases of primary syphilis with spirochætæ pallida present and a positive blood Wasserman test ; a further 10 per cent. of cases showed secondary lesions ; 54 per cent., therefore, of the cases of syphilis were early fresh infections.

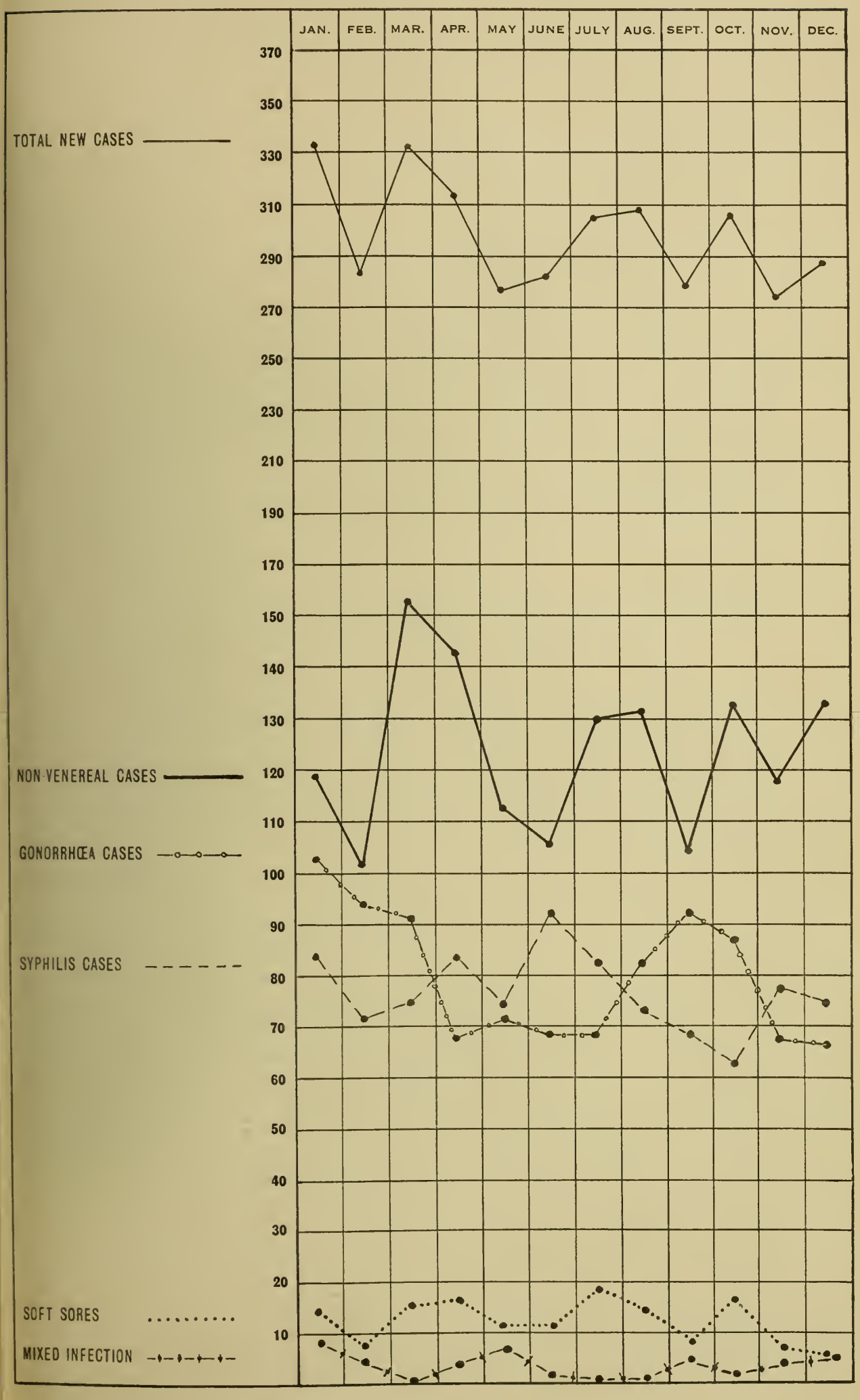
Congenital Syphilis.

There is a decrease in the number of cases of inherited syphilis. There is no doubt that this decreasing figure is contributed to by the amount of antenatal treatment which is being administered in the antenatal clinics at the various maternity hospitals.

Inherited syphilis can be largely prevented if mothers who suffer from syphilis are efficiently treated during pregnancy. The increasing number of pregnant women who are availing themselves of the antenatal treatment provided under the Edinburgh scheme has undoubtedly contributed to a reduction in the incidence of inherited syphilis in newly-born children.

COMPARATIVE INCIDENCE OF TYPES OF VENEREAL DISEASE

(ROYAL INFIRMARY VENEREAL DISEASES CLINIC)



The following Table shows very clearly the increasing disparity between the total number of cases of inherited syphilis treated under the scheme, and the number of those who are under one year of age :—

	Total Cases of inherited Syphilis.	Number under one year of age.
1921-22	518	167
1922-23	368	100
1923-24	599	129
1924-25	402	145
1925-26	590	180
1926-27	350	77
1927-28	496	96
1928-29	280	81

Gonorrhœa.

There is a decrease in the number of cases of gonorrhœa in both sexes.

Ophthalmia Neonatorum.

The total number of infants treated under the scheme for a purulent conjunctivitis, suspected to be gonococcal, was 29. Of these, 18 were from Edinburgh and 11 from other areas. The number of cases notified to the Health Authority of Edinburgh was 29. On analysing the 29 cases which were in hospital, 17 were found, as a result of bacteriological tests, to be cases of ophthalmia neonatorum, 11 from Edinburgh and 6 from outside areas. Two cases from outside areas were sent into hospital at the age of one month with the eye irreparably damaged on admission ; in both of these infants there has been partial loss of vision in one eye. In none of the cases from the Edinburgh area was there any impairment of vision.

We have no doubt that in the two cases above mentioned, treatment was delayed much too long ; the eye could undoubtedly have been saved if the purulent conjunctivitis had been treated on correct lines immediately after its onset.

As we have stated in previous reports, the number of infants in whom the risk of blindness is incurred, although decreasing, is still much too large. There is no condition which is more easily preventable or more amenable to treatment if dealt with at once. Prophylactic measures, however, require skill, and should be personally carried out by the medical attendant at every confinement ; in-patient hospital treatment should be available in every suspected case, and in practice this gives excellent results.

In training nurses, midwives, and students, the importance of efficient prophylaxis and of meticulous attention to all its details cannot be over emphasised if we are to lessen the incidence of this dangerous condition.

Vulvo-Vaginitis.

The figures for 1929 show a decrease in the number of cases of vulvo-vaginitis in female children. This type of case also requires in-patient treatment, if only to safeguard other children. Few of the cases have been due to assault, and the larger number are the result of contamination from the underwear of infected parents.

Bacteriological and Serological Work.

A total of 48,821 specimens were examined by Dr. Logan and his staff in the Royal Infirmary Laboratory. Medical practitioners and outside institutions submitted 6,194 specimens for examination ; the others were submitted from wards in the Royal Infirmary and by the various clinics under the scheme.

The Edinburgh Corporation Centres are fortunate in having an excellent laboratory behind their clinical work, and the director and his staff continue to provide a high standard of service which is of very great value to the scheme.

Treatment.

In cases of syphilis an aim is made to make the treatment as intensive as possible without undermining the health of the patient, and the centres have been fortunate in that there have been very few cases of severe intolerance to treatment. In every

case of syphilis, salvarsan or one of its substitutes and bismuth have been administered together. This dual therapy is much more efficient than either drug alone in rapidly sterilising the patient and in making for a permanent cure. In cases of neuro-syphilis, malarial therapy and intravenous injections of tryparsamide have been largely employed, both separately and in combination, and the results are promising.

Various new methods of treatment and many new preparations have been tried out, but nothing has eventuated from this to justify one in supplanting the existing methods of treatment by arsenic and bismuth or arsenic and mercury.

Cases of gonorrhœa have been treated along the lines mentioned in previous reports.

End Results of Treatment and Standards of Cure.

The percentage of cases discharged as cured continues to be very satisfactory. All cases of gonorrhœa can be cured, and the standard which has been aimed at often demands as long a time for testing as does the actual treatment. The importance of being certain of cure is paramount if we are to check the spread of this disease.

In gonorrhœa in the female, in-patient treatment is undoubtedly much more rapid in its results than out-patient treatment, and there is a constant demand for beds for this type of case.

In considering the cases of syphilis, the very marked increase in the number of patients reporting in the early stages of the disease, 54 per cent., should enable us to obtain exceedingly good results, as there is no doubt that the earlier a patient is treated the better is the prospect of cure and the less costly the treatment to the Local Authority. Every case of syphilis is observed for at least two years, and we are now able to discharge a steady number commensurate with the number of new patients reporting.

Discharges and Transfers.

The number of patients who were discharged, after undergoing tests of cure, was 3677. The number of patients transferred to other centres was 890 ; while approximately 3,500 patients remained under active treatment.

Percentage continuing at treatment until considered cured.

The percentage of defaulters from treatment, estimated on the ratio which the number of defaulters bears to the total number of cases leaving the centres for any reason, is 25.1 per cent. This figure shows a steady decrease from previous years.

Follow-up work.

An attempt has been made to get into touch with every defaulter, by letter in some cases, in others by visits from the staff attached to the clinic and by the special nurse appointed for this purpose, in others by letters to the family doctor.

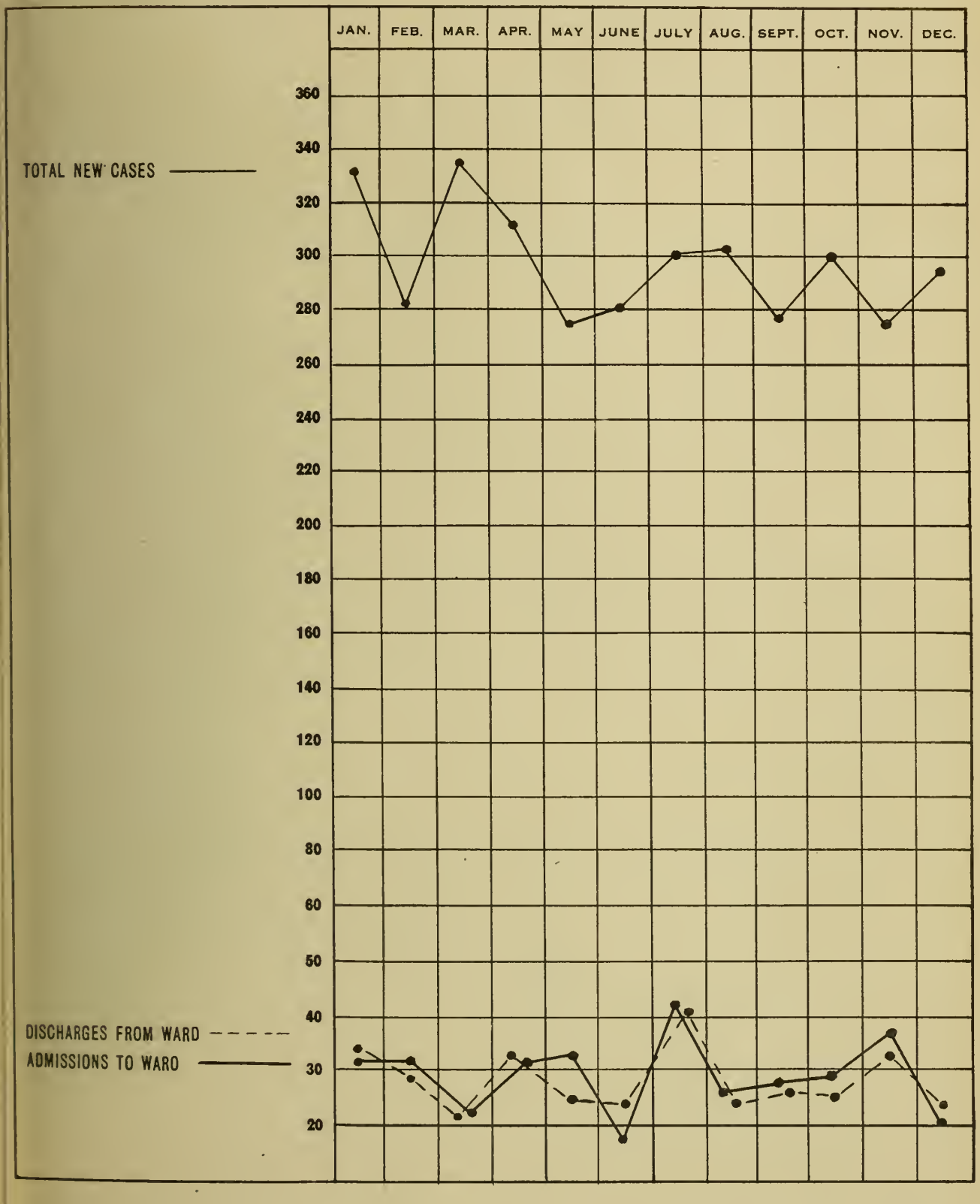
Much more can be done in following up female patients than in the case of male patients. It is difficult to send a visitor to the home of a male patient with any hope of finding him in except after his hours of work. A visit at this time by a hospital official would undoubtedly create suspicion in the case of both married and single men. Unless, therefore, other means are obtained of getting into touch with defaulting male patients than by correspondence, very little appreciable progress will be made in reducing the male defaulter rate.

The report of Nurse Marshall, the Home Visiting Nurse attached to the Clinics is as follows :—

> " During the year 892 names of patients who ceased attending have been submitted from the various clinics ; of this number 690, or 77.3 per cent. returned for treatment and advice. Of the remaining number, 126 could not be traced, and 76 refused to return in spite of explanation, persuasion, and warning. The number of visits, letters written, and interviews in all amounted to 2,752.

NUMBER OF NEW PATIENTS AND PROPORTION REQUIRING IN-PATIENT TREATMENT

(ROYAL INFIRMARY VENEREAL DISEASES CLINIC)



"In visiting the homes of V.D. patients the utmost care and tact is exercised. The public health aspect of the work is the first essential, but it is at the same time important to avoid disturbing the peace of the home.

"While the percentage of patients who have returned to the clinics is satisfactory, there is the unfortunate fact that many of those who return, default soon after, while others refuse to return for treatment in spite of all warning and explanation. Knowing that many of these patients are in a contagious condition, and that they are likely to spread disease in the community, the position often seems hopeless, and nothing can be done to remedy it under the present V.D. legislation. As things are, no means exist of safeguarding the community from the careless and infected individual.

"In our work an effort is made to concentrate on infected pregnant women, and the results in these cases are good. As ante-natal care and treatment become more popular there should be sufficient work in this sphere alone for a whole-time worker.

"Everything possible is done to make it easy for the patient to attend regularly; travelling expenses are refunded, clothing and extra nourishment are provided when necessary, and cases requiring a change of environment are sent on short holidays.

"The problem of the infected single girl remains as acute as formerly. When they cease attending, and can be traced, it is frequently found that many of them are the victims of circumstances, and that this and some degree of moral and mental defect are largely responsible for their condition. In dealing with this type, it is essential to appreciate the patient's difficulties, and an attempt has to be made to teach her to put a proper value on her future health if we are to succeed in gaining her confidence and getting her to return for treatment.

"It is apparent from my work that increased hospital accommodation for mothers and babies is required, and, in addition, an afternoon clinic for mothers and babies. A municipal home, hostel, or lodging house, for women and girls would be of incalculable benefit, while the establishment of a fund for use in special circumstances would enable the visiting nurse to overcome many monetary difficulties without undue delay.

"Even with these advantages provided, there would remain a percentage of cases for whom further legislative action is essential if we are to succeed in our work.

"I desire to thank the Almoners of the Royal Infirmary for the very great help and co-operation which they have given me in arranging holidays and help for needy patients. I have also obtained valuable assistance from the Parish Council and from many social workers in the City in dealing with difficult girls requiring prolonged supervision and care."

The Nurse Almoner deserves the greatest credit for her work, and her report shows the remarkable success and skill with which she has dealt with many difficult situations. As she states, some of the defaulters present to her most difficult and disheartening situations. There is no doubt that the suggestion which she makes regarding a municipal hostel would, if adopted, enhance the value of the Edinburgh scheme and make it more complete. There is, also we believe, an increasing volume of enlightened opinion in favour of the Health Authority being given a measure of control over contagious cases.

Treatment of the Mercantile Marine.

The Treatment Centre at the Seamen's Dispensary, Leith, continues to do good work. The number of patients has steadily increased since the centre was opened, and considering that patients here are of the migratory type, the increase in the attendances from 11,099 to 12,847 must be considered satisfactory.

Treatment Centre. Royal Blind School.

The investigation of cases of partial or complete blindness which was commenced in 1928 has steadily progressed. An average of 26 cases whose blindness is due to inherited disease are receiving treatment weekly. The general health of these patients has been steadily maintained. It is noteworthy that during the winter months the children receiving treatment appeared to be less subject to the prevalent catarrhal conditions than the other pupils in the school.

During the year 73 new patients in this school were examined, and 7 were found to have inherited disease. There are now a total of 140 children in the school who have been examined, treated if necessary, and kept under observation, since the initiation of the scheme in 1928.

An attempt is being made by the medical staff to investigate the cause of blindness in all the pupils attending the institution, and with this in view, the history of 80 out of 160 pupils has been investigated.

In this work my staff have had the whole-hearted co-operation of the Superintendent and the management of the Institution, who are satisfied that the health of a very considerable number of the inmates has been improved to such an extent as to enable them to obtain greater benefit from their education and training.

Tables and Diagrams.

The work of the various treatment centres is seen in the Tables attached to this report. The diagrams indicate the seasonal incidence of the disease, the various types of infection, and the number of individuals requiring in-patient treatment. A further chart shows the attendance rate at the Royal Infirmary Centre.

Co-operation with other Departments.

In any future development under the Venereal Diseases Scheme, it is of the utmost importance that the case of the married mother and the child should be seriously considered. It is obviously unfair to label as a case of acquired venereal disease a mother who has been innocently infected, and who has been referred by her doctor to some other department of hospital for a clinical condition which on investigation is found to be due to syphilis or gonorrhœa. It should be possible to treat such cases in wards for diseases of women. Further, it is still more unfair in the case of the boy or girl, whose infection has been conveyed to them from their parents, to label them as cases of acquired disease.

Under the new Local Government Act for Scotland a Local Authority has the power to provide, maintain, and equip hospital beds for sick persons, and in this provision an effort should be made to treat as many mothers and children as possible, under the Child Welfare Scheme, with the definite purpose of preventing any stigma or slur being cast on the innocently infected mother or child.

The administration of this work will call for close co-operation between the Child Welfare Department, the Gynecological Departments of Hospitals, and the Antenatal and Maternity wards. It is gratifying to know that those responsible for such cases, and especially the Child Welfare Officer, are in complete agreement with our views on this subject.

In submitting this report I desire to bring to your notice the very great assistance which I have at all times had from the medical, nursing, and clerical members of my staff. The volume of the work carried through by the staff of this department, as seen in this report, is large and much of it is of a difficult nature. I have been fortunate in having the loyal co-operation of my colleagues and a most enthusiastic staff, and to them is due much of the success, the smooth working, and the continued efficiency of the scheme.

DAVID LEES, D.S.O., M.A., M.B., F.R.C.S.(E.), M.R.C.P.(E.),
Clinical Medical Officer, Edinburgh Corporation Venereal Diseases Scheme.

[TABLES.

EDINBURGH CORPORATION VENEREAL DISEASES SCHEME.

ROYAL INFIRMARY CLINIC.

REPORT FOR THE YEAR ENDING 31ST DECEMBER 1929.

Number of New Cases Attending :—

	EDINBURGH.		OTHER AREAS IN SCHEME.		OTHER AREAS OUTSIDE SCHEME.		AREAS OUTSIDE SCOTLAND.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
January . .	183	71	35	10	26	6	...	...
February . .	140	54	35	17	28	4	3	...
March . . .	179	49	47	19	23	13	2	...
April . . .	141	67	46	20	27	7	5	...
May . . .	126	52	29	27	27	12	2	...
June . . .	117	72	44	19	14	8	6	...
July . . .	149	55	40	22	20	9	5	...
August . .	171	48	37	8	18	16	4	...
September . .	156	35	38	11	27	9	2	...
October . .	176	60	26	12	9	11	6	...
November . .	143	52	39	8	21	10	3	...
December . .	142	62	45	15	18	3	4	...
Totals .	1823	677=2500	461	188=649	258	108=366	42	...=42

EDINBURGH	2500
Other Areas in Scheme	649
Other Areas outside Scheme	366
Areas outside Scotland	42
Grand Total	3557

Of the New Cases Attending there were :—

EDINBURGH.

	Males.					Females.			
	Syphilis.	Gonorrhœa.	Soft Sore.	Mixed Inf.	No V.D.	Syphilis.	Gonorrhœa.	Mixed Inf.	No V.D.
January . .	45	61	12	4	61	26	15	...	30
February .	30	52	6	2	50	19	18	2	15
March . .	36	47	13	...	83	15	13	...	21
April . .	30	43	7	...	61	26	8	...	33
May . .	34	39	6	2	45	19	6	3	24
June . .	27	39	8	1	42	31	10	1	30
July . .	30	40	11	...	68	25	2	...	28
August . .	39	54	10	1	67	17	10	...	21
September .	33	57	6	2	58	13	6	2	14
October . .	30	64	15	1	66	12	12	1	35
November .	32	37	3	2	69	20	7	...	25
December .	31	37	2	4	68	23	9	1	29
Totals .	397	570	99	19	738	246	116	10	305

OTHER AREAS IN SCHEME.

	Males.					Females.			
	Syphilis.	Gonorrhœa.	Soft Sore.	Mixed Inf.	No V.D.	Syphilis.	Gonorrhœa.	Mixed Inf.	No V.D.
January . .	7	12	3	4	9	1	4	...	5
February .	5	14	1	...	15	6	4	...	7
March . .	8	16	1	...	22	8	4	...	7
April . .	7	10	6	2	21	10	1	...	9
May . .	5	11	3	1	9	7	4	...	16
June . .	14	12	3	...	15	10	2	...	7
July . .	10	15	3	...	12	9	6	...	7
August . .	7	11	3	...	16	1	...	...	7
September .	8	15	2	...	13	6	1	...	4
October . .	9	9	2	...	6	3	...	...	9
November .	8	16	3	2	10	2	1	...	5
December .	10	15	2	...	18	7	2	...	6
Totals .	98	156	32	9	166	70	29	...	89

OTHER AREAS OUTSIDE SCHEME.

	Males.					Females.			
	Syphilis.	Gonorrhœa.	Soft Sore.	Mixed Inf.	No V.D.	Syphilis.	Gonorrhœa.	Mixed Inf.	No V.D.
January	5	8	...	1	12	...	4	...	2
February	10	6	...	1	11	1	1	...	2
March	3	9	1	...	10	4	1	...	8
April	6	5	2	...	14	3	1	...	3
May	5	7	3	...	12	4	2	...	6
June	3	3	...	...	8	4	1	...	3
July	3	2	4	1	10	4	1	...	4
August	5	3	2	...	8	4	3	...	9
September	8	8	1	...	10	1	3	1	4
October	...	1	...	...	8	6	...	...	5
November	12	3	1	1	4	3	2	...	5
December	5	2	1	...	10	...	...	1	2
Totals	65	57	15	4	117	34	19	2	53

AREAS OUTSIDE SCOTLAND.

	Males.					Females.			
	Syphilis.	Gonorrhœa.	Soft Sore.	Mixed Inf.	No V.D.	Syphilis.	Gonorrhœa.	Mixed Inf.	No V.D.
January	...	...	...	...	...	...	...	...	...
February	...	1	...	...	2	...	...	...	...
March	...	1	...	...	1	...	...	...	...
April	1	1	1	1	1	...	...	...	...
May	2	...	...	...	...	...	...	...	...
June	3	2	...	...	1	...	...	...	...
July	1	2	1	...	1	...	...	...	...
August	...	2	...	...	2	...	...	...	...
September	...	2	...	...	...	...	...	...	...
October	3	...	...	...	3	...	...	...	...
November	1	2	...	...	...	...	...	...	...
December	...	2	1	...	1	...	...	...	...
Totals	11	15	3	1	12	...	...	...	...
Grand Total	571	798	149	33	1033	350	164	12	447
			2584				973		
					3557				

AGE PERIODS.

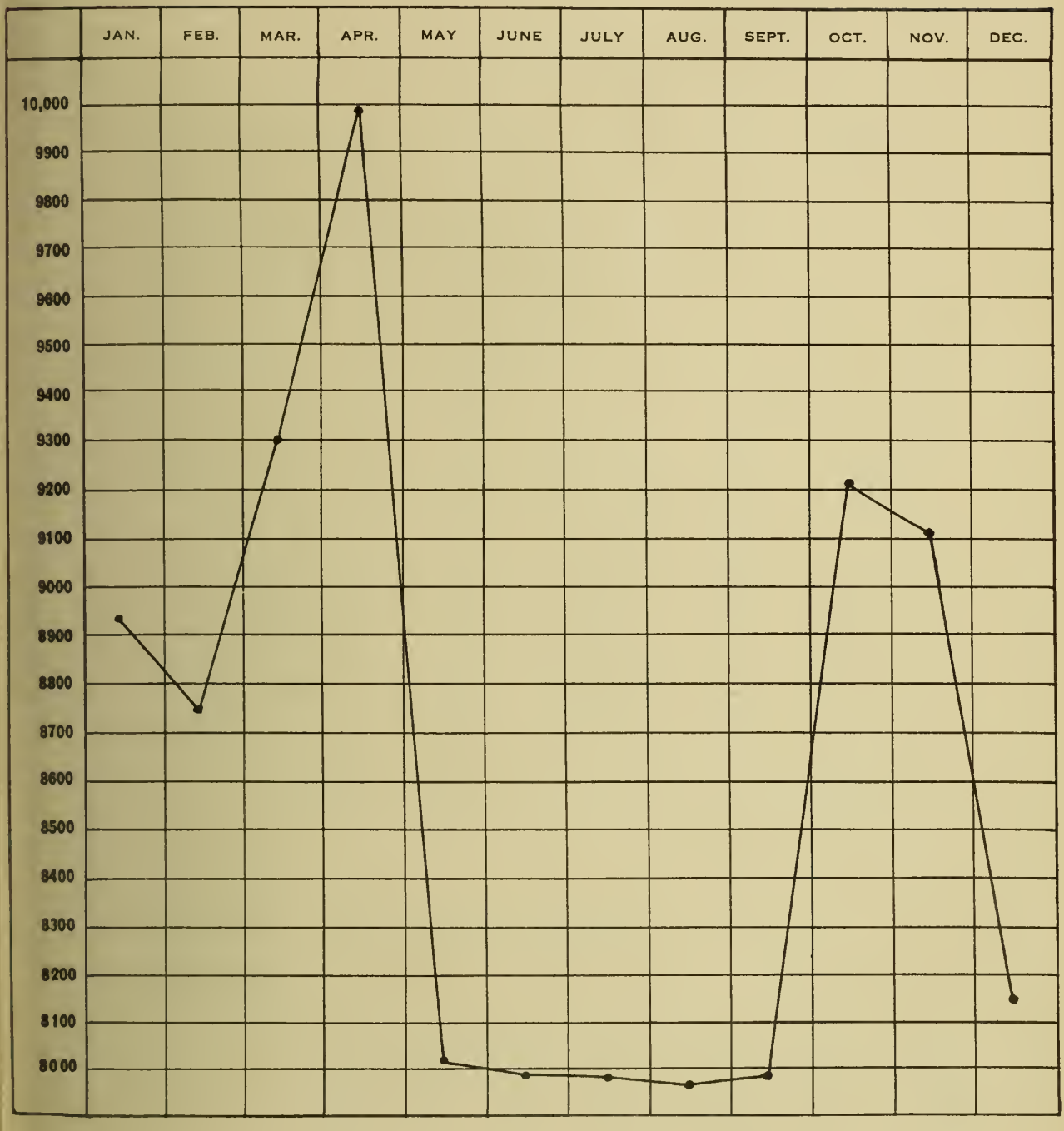
	Males.					Females.			
	Syphilis.	Gonorrhœa.	Soft Sore.	Mixed Inf.	No V.D.	Syphilis.	Gonorrhœa.	Mixed Inf.	No V.D.
Under 1 yr.	...	...	...	...	...	14	3	...	47
1–5 yrs.	...	...	...	...	...	10	6	...	51
5–15 yrs.	13	...	...	...	16	36	4	...	88
15–25 yrs.	104	224	69	6	250	92	60	5	95
25 yrs. up	454	574	80	27	767	198	91	7	166
Totals	571	798	149	33	1033	350	164	12	447

Admissions to Hospital :—

	Males.					Females.			
	Syphilis.	Gonorrhœa.	Soft Sore.	Mixed Inf.	No V.D.	Syphilis.	Gonorrhœa.	Mixed Inf.	No V.D.
Edinburgh	46	44	8	2	18	43	20	2	12
Other Areas in Scheme	25	26	5	2	7	16	7	...	3
Areas outside Scheme	13	15	2	1	4	11	12	1	3
Areas outside Scotland	...	...	...	...	1	...	...	...	...
Totals	84	85	15	5	30	70	39	3	18
			219				130		

CHART SHOWING MONTHLY ATTENDANCES

(ROYAL INFIRMARY VENEREAL DISEASES CLINIC)



Discharges from Hospital :—

	Males.					Females.			
	Syphilis.	Gonorrhœa.	Soft Sore.	Mixed Inf.	No V.D.	Syphilis.	Gonorrhœa.	Mixed Inf.	No V.D.
Edinburgh .	42	38	10	3	17	42	18	3	10
Other Areas in Scheme .	30	25	5	...	6	14	7	...	2
Areas outside Scheme . .	11	13	3	...	5	14	12	1	4
Areas outside Scotland .	...	2	...	...	...	...	...	...	...
	83	78	18	3	28	70	37	4	16
			210				127		

SPECIAL TREATMENT ADMINISTERED.

Number of Intravenous and Intramuscular Injections given :—

	Neokharsivan.	Sulfarsenol.	Bismuth.	Other Drugs.	Total.
January	578	538	2,065	752	3,933
February	618	489	2,264	763	4,134
March	718	600	2,303	963	4,584
April	660	597	2,301	751	4,309
May	655	738	2,154	715	4,262
June	571	680	2,187	715	4,153
July	484	721	2,154	720	4,079
August	660	721	2,249	763	4,393
September . . .	636	529	2,204	780	4,149
October	859	711	2,609	912	5,091
November . . .	902	676	2,477	1,046	5,101
December . . .	878	690	2,253	1,069	4,890
	8,219	7,690	27,220	9,949	53,078

PATHOLOGICAL WORK.

Number of Specimens examined :—

	Wass.	C.S.F.	G.C.F.T.	D.Gs.	Smears.	Others.	Total.
January	1,477	43	305	189	1,149	45	3,208
February	1,181	27	289	108	1,083	18	2,706
March	1,350	33	287	127	1,032	4	2,833
April	1,274	28	276	150	1,033	13	2,774
May	1,338	45	249	114	876	5	2,627
June	1,125	43	229	100	820	6	2,316
July	824	43	227	106	950	4	2,154
August	1,053	37	286	84	809	5	2,274
September	960	35	260	85	693	5	2,038
October	1,362	40	281	130	1,010	6	2,829
November	1,413	30	298	108	982	54	2,885
December	1,117	52	294	92	857	12	2,424
	14,474	456	3,274	1,393	11,294	177	31,068

Total Attendances at the Clinic for Routine Dressings, etc. :—

	Males.	Females.	Total.
January	6,908	2,004	8,912
February	6,828	1,900	8,728
March	7,170	2,130	9,300
April	7,869	2,090	9,959
May	5,735	2,284	8,019
June	5,907	2,066	7,973
July	5,888	2,026	7,914
August	5,584	2,270	7,854
September	5,899	2,005	7,904
October	6 984	2,230	9,214
November	6,918	2,190	9,108
December	6,342	1,824	8,166
	78,032	25,019	103,051

OTHER TREATMENT CENTRES IN EDINBURGH.

1. Subsidiary Centres for Royal Infirmary.

Number of New Cases 301

Syphilis.	Gonorrhœa.	Mixed Infection.	No. V.D.	
95	64	1	141	=301

Number of Patients treated in Hospital 140
Total Attendances of Out-patients 2340
Pathological Work—Number of specimens examined 2753
Special Treatment administered—Number of Injections given 3569

2. Hospital for Women and Children and Subsidiary Centres.

Number of New Cases 719

Syphilis.	Gonorrhœa.	Mixed Infection.	No. V.D.	
100	393	22	204	=719

Number of Patients treated in Hospital 216
Total Attendances of Out-patients 7877
Pathological Work—Number of specimens examined 3654
Special Treatment administered—Number of Injections given 2035

3. Royal Maternity Hospital.

Number of New Cases 987

Syphilis.	Gonorrhœa.	Mixed Infection.	No. V.D.	
240	457	24	266	=987

Number of Patients treated in Hospital 274
Total Attendances of Out-patients 2511
Pathological Work—Number of Specimens examined 3193
Special Treatment administered—Number of Injections given 841

4. Seamen's Dispensary, Leith.

Number of New Cases 349

Syphilis.	Gonorrhœa.	Soft Sore.	Mixed Infection.	No. V.D.	
67	124	25	17	116	=349

Total Attendances of Out-patients 12,847
Pathological Work—Number of specimens examined 1959
Special Treatment administered—Number of Injections given 1888

DAVID LEES, D.S.O., M.A., M.B., F.R.C.S.(E.), M.R.C.P.(E.),
Clinical Medical Officer, Edinburgh Corporation V.D. Scheme.

PORT MEDICAL INSPECTION.

The following report in connection with the Port Medical Inspection has been prepared by Dr. Grierson, Assistant Medical Officer of Health, who is in charge of this branch of the Department's work.

I have the honour to submit the Annual Report of the work in connection with the Port Medical Inspection.

The trade of the Port of Leith is world-wide, as is indicated by the following list of foreign ports from which vessels arrive in the Port Sanitary District :—

Principal Trading Ports.

North American—New York, Philadelphia, Portland, Baltimore, Montreal, San Francisco.

South American—Buenos Aires, Bahia Blanca, Rosario.

Continental—Stockholm, Helsingfors, Leningrad, Libau, Konigsberg, Danzig, Stettin, Hamburg, Bremen, Copenhagen, Amsterdam, Rotterdam, Antwerp, Havre, Bordeaux, Oporto, Lisbon.

Mediterranean—Marseilles, Oran, Bona, Tunis, Alexandria, Port Said.

Indian—Karachi, Bombay, Calcutta, Rangoon.

Eastern—Shanghai, etc.

The bulk of the foreign shipping comes from Continental Ports. In addition there is a large amount of coastwise shipping from Home Ports, besides the constant arrival of vessels in the fishing industry.

AMOUNT OF SHIPPING ENTERING THE PORT SANITARY DISTRICT DURING THE YEAR 1929.

	Number.	Tonnage.	Number Inspected		Number Reported to be Defective.	Number of Notices Issued.
			by Assistant M.O.H.	by the Sanitary Inspector.		
Foreign—						
Steamers . .	1,522	1,392,439	97	638	17	7
Motor . . .	13	13,805	1	10	...	...
Sailing . .	4	474	3	...	...	...
Fishing . .	...	...	...	...	...	...
Total Foreign .	1,539	1,406,718	101	648	17	7
Coastwise—						
Steamers . .	4,556	1,182,758	4	144	14	1
Motor . . .	25	28,310	...	5	...	...
Sailing . .	86	5,751	...	...	...	...
Fishing . .	3,618	282,285	...	300	...	...
Total Coastwise .	8,285	1,499,104	4	449	14	1
Total Foreign and Coastwise . .	9,824	2,905,822	105	1,097	31	8

IMPORTS AND EXPORTS.

The principal items of cargo imported at Leith consist of wheat, barley, oats, maize, rye, flour, meal, sugar, fruit, cement, timber, guano, manure, flax, hemp, fish (fresh and cured), butter, eggs, and esparto grass. Of these the chief import is grain.

The exports are chiefly coal, iron, oil, liquor and ammonia. Coal is the heaviest export.

In the following statement particulars are given regarding cases of illness reported from vessels arriving at the Port :—

Date.	Name of Vessel.	Nature of Illness.
Jan. 23	"Soumen Poika"	One Case Influenza.
April 10	"Arracan"	do. Sickness.
,, 18	"Clermiston"	do. Disease of stomach.
,, 18	do.	do. Heart disease
,, 30	"Venar"	do. Indigestion.
June 3	"Scotscraig"	do. Heart disease — died in Edinburgh Royal Infirmary of syphilitic heart disease.
,, 10	"Katland"	do. Tuberculosis
,, 12	"Sprightly"	do. Pneumonia.
,, 29	"Severin"	do. Scalp wound.
July 10	"Quaker City"	do. Disease of stomach.
,, 10	"Kobda"	do. Hæmorrhage.
,, 11	"Risor"	do. Conjunctivitis.
,, 12	"Peuratas"	do. Accident to spine.
Aug. 3	"Avon"	do. Measles.
,, 12	"Colorado Springs"	do. Venereal disease.
,, 23	"Birte"	do. Discase of chest.
Sept. 13	"Denmark"	All well on board. Chief Officer landed at Singapore as Plague suspect.
,, 30	"Ronan"	Seaman drowned at Amsterdam and brought home to Leith.
Oct. 24	"Braemar"	One Case Venereal disease.
Nov. 28	"Branksome Hall"	do. Tuberculosis.
,, 28	do.	do. Pneumonia.
Dec. 12	"Burma"	do. Mumps.

During the year 1,332 alien passengers arrived at the Port, and of these 128 were medically examined at the request of H.M. Alien Immigration Officer.

The alien passengers were classed as follows :—

Resident returning.	In transit.	Visitors of Six Months or less.		Diplomats and persons on Foreign Government Missions.	Seamen.	Seamen under contract to join ship in British waters.	Ministry of Labour Permit			Other Aliens		
		On holiday, tourists, etc.	On Business.				Males.	Females.	Children under 16.	Males.	Females.	Children under 16.
42	435	598	179	2	1	28	12	7	...	15	11	2

The statistical data in this report have been kindly supplied by the Port Sanitary and Immigration Officers, who have always given most helpful assistance in matters pertaining to their branches of work.

In conclusion it can be stated that although trade is still bad and many ships lie idle, the port was busier in 1929 than in the previous two years. The total number of vessels entering the Port Sanitary District was 9,824, as compared with 9,318 in 1928, being an increase in tonnage of 107,768 tons.

It has to be recorded that as in former years placards in connection with venereal disease are maintained in selected places about the Docks. These are printed in English, Norwegian, Dutch, and German, and are for the benefit of dockers and sailors of different nationalities. The notices draw attention to the existence and location of the Seamen's Dispensary at the Shore, where skilled treatment is available.

I have the honour to be, Sir,

Your obedient Servant,

A. M. M. GRIERSON, M.D., D.P.H.

FACTORY AND WORKSHOP ACTS.

This part of the report directs attention to the important duty of the administration of the Factory Acts in so far as they concern the local authority. It is the duty of the Medical Officer of Health to report annually on the administration of these Acts, and the tabular statements given on pages 86–87 are in addition to, and supplement, the statistical information which is annually forwarded to the Home Office.

The Tables give details of the varions matters detected in offence of the law, and show the improvements effected during the year under review. It is unnecessary to enlarge upon these statistics, but it may be appropriate to refer to some of the fundamental matters and the industrial conditions necessary for safeguarding health.

Workshops.—The science of hygiene has made noteworthy advances in recent years, and this, of course, has been reflected in the raising of factory standards. It is easy to point to individual firms with modern buildings and equipment which fulfil almost every reasonable requirement, and it is equally easy to point to others which fall far below modern standards. Take first, the general question of cleanliness. In the up-to-date premises the standard set is often high. Walls, floors, and ceilings are spick and span, but there are many other workplaces, particularly in old buildings, where the standard of cleanliness is low. The factory standard is often very different from the domestic standard. In the domestic house the dangers of dust and dirt and cobwebs are usually fully recognised. In many homes these foes are hunted with rigour and frequency, but in the factory or workshop—perhaps because the management of the factory has hitherto been regarded as a man's job—the attitude is very different. There are still occupiers who think a workshop is sufficiently clean if the dirt is not patently offensive. Often the danger to health that lurks in accumulations of dust, rubbish, and refuse is treated in rather a disinterested fashion.

Other important factors which have a great effect on the health and efficiency of the worker are light and ventilation. Modern buildings are usually built with large windows, and so constructed as to be admirably lit throughout, yet there are other places in which the light is very poor. The old view was that so long as there was enough light to do the work, that was sufficient. Happily that idea has given place to the fuller recognition of the fact that light is a great tonic. To-day enlightened employers of labour recognise the health-giving principles of sunlight, and that light has a vital effect on our physique, on our nerves, and on our spirits. If the worker is not supplied with sufficient light his health and industrial efficiency are lessened. Similar circumstances arise in connection with ventilation. The enormous importance of fresh air, and frequently changed air, is now more fully appreciated and the dangers of a dust-laden atmosphere guarded against.

Another very important topic to which more and more attention is now being given is the question of personal hygiene amongst the workers. Although many improvements for the comfort of the workers have been brought about by means of statutory welfare, what is known as voluntary welfare perhaps plays an even greater part. It is very desirable that so far as lies within their power, employers should encourage this development by providing cloakrooms, washing facilities, overalls, &c.

New legislation in the shape of a Factories Bill has been referred to in previous annual reports. The general object of the Bill is to raise the standard of the more

backward factories and workshops to the level which has already been reached by progressive employers. Objection has been raised that, with trade and industry suffering from serious handicaps, the present time is inopportune for the introduction of new burdens on employers of labour. Amidst the drift and welter of politics, and the rise and fall of Governments, the reform has not yet come into being. As recently as the month of March, the Chancellor of the Exchequer, answering a question in the House of Commons, said that in the present state of public business he was unable to say when the Factories Bill would be introduced.

Bakehouses.—By the Scottish Board of Health (Factories and Workshops Transfer of Powers) Order, 1921, the special regulations of the Factory Act applicable to Bakehouses are administered by the Local Authority. During the year there were 16 instances of occupiers failing to comply with the statutory limewashing requirements. On notice being served, compliance in each case was secured.

In the course of the year a rather unusual complaint reached the Department. It had reference to obnoxious fumes which were penetrating into a house on the first floor of a large tenement. The fumes were found to emanate from an underground bakehouse in which Vienna bread was being manufactured. For this kind of bread it is usual to have a specially constructed Vienna oven, but in this instance an ordinary Scotch type of oven with an inside fire was being used. Besides getting up the ordinary baking heat, the oven received an injection of steam from a boiler. This had the effect of creating the objectionable gas which penetrated to the tenant's house and prejudiced the health of those living there. An opportunity was given to abate the nuisance, but without success, and on the instructions of the Department the baker was compelled to vacate the premises.

The necessity for cleanliness in the processes relating to the production of bread has been constantly stressed. Although vast improvement has been made in the standard of sanitation found in the baking industry, it is still a common experience to find insanitary conditions, such as floors which have been allowed to become encrusted with sugar and flour and deposits of a kind that cannot be removed without great difficulty; shelves which are coated with grease in all stages of decomposition; and odd corners and recesses used as receptacles for floor sweepings and in which insect life and dirt of all descriptions abound.

It is admitted that modern structures have been improved far beyond the law so far as their hygienic conditions are concerned, but the older enterprises, whilst fulfilling the letter of the law, lag far behind modern hygienic requirements. There is a steady decline in the number of underground bakehouses, but even at this time of day a large number are still in occupation. Many of these places were built a couple of generations ago, in accordance with the standards and knowledge of the time. Now they are out of date. It may be argued that they must conform to the law. This is, in general, true, but the legal standards now required were determined very largely by what was possible having regard to the existing industrial structures. In certain directions the requirements of the law have, from time to time, been raised and strengthened, but they have been restricted because of the desire to avoid wholesale closures. Apart from the structural difficulty of improving these places, there is another aspect of the problem which it is impossible to ignore, namely, the difficulties which beset the employer in providing for capital expenditure.

Every opportunity is taken to stimulate hygienic development in the baking trade, but this can only be advanced by mutual understanding and combined effort on the part of employers and operatives. What is wanted is a fuller appreciation of the benefits which accrue from the close association of hygiene and industry.

Total Number of Inspections of Factories and Workshops		1,767
Number of Written Notices served		125
Complaints received from H.M. Inspector of Factories, as remediable under the Public Health Act, but not under the Factory Act		1
Complaints *re* Sanitary Accommodation (Structural Work) for Factories and Workshops: Intimations received by Local Authority from District Inspector of Factories, in order that the Council may have opportunity of enforcing any additional conditions under Local Acts—Work carried out, inspected and reported upon		0
Notices received from H.M. Inspector of Factories (for the information of Local Authority) *re* Bakehouses—Scottish Board of Health (Factories and Workshops Transfer of Powers) Order, 1921		1
Miscellaneous Complaints :—		
Received from other Departments	9	
Anonymous	2	
Received from Public	10	
	—	21
Matters referred to H.M. Inspector of Factories for his attention		19
Number of Notices of Occupation of Workshops received from H.M. District Inspector of Factories for the year 1929		33

HOME WORK—LIST OF OUTWORKERS.

	Feb. 1929.	Aug. 1929.
Number of Lists received	33	38
Number of addresses of Outworkers in Edinburgh	87	84
Number of addresses transmitted to other Authorities	21	19
Number of addresses received from other Authorities	7	4
Actual number of Outworkers on Register, at date of last Returns ...		73

CLASSES OF WORK ENGAGED IN BY OUTWORKERS IN EDINBURGH.

(1) Making, altering, repairing, etc., of Wearing Apparel.

(2) Making up, finishing, and repairing of Table Linen, etc.

(3) Rug Making.

TABLE showing the distribution of Workshops throughout the City, the neglects and defaults found and remedied, and the general sanitary improvements in 1929.

	I. Calton.	II. Canongate.	III. Newington.	IV. Morningside.	V. Merchiston.	VI. Gorgie.	VII. Haymarket.	VIII. St. Bernard's.	IX. Broughton.	X. St. Stephen's.	XI. St. Andrew's.	XII. St. Giles.	XIII. Dairy.	XIV. George Square.	XV. St. Leonard's.	XVI. Portobello.	XVII. South Leith.	XVIII. North Leith.	XIX. West Leith.	XX. Central Leith.	XXI. Liberton.	XII. Colinton.	XXIII. Corstorphine and Cramond.	TOTAL.
Number of Workshops on Register at 31st December 1929	45	35	43	49	49	28	97	24	57	52	210	120	32	89	34	26	47	35	17	31	13	9	20	1162
Number of Inspections made	55	13	53	50	59	26	119	32	67	78	271	142	40	95	46	42	45	36	22	34	9	6	20	1360
Walls and Ceilings of Workshops (or parts) cleansed	2	1	7	1	1	...	7	1	4	4	18	10	1	8	5	3	3	4	1	3	...	...	1	85
Floors, Windows, &c., of Workshops cleansed	1	1	3	5	1	...	...	...	...	2	10	6	1	...	1	...	1	1	1	...	...	...	...	34
Walls of W.C. compartments cleansed	2	...	2	...	1	...	2	...	1	1	6	7	...	1	1	1	1	...	...	1	...	...	...	27
Water Closets cleansed	1	1	3	2	...	1	1	...	...	1	2	1	2	...	1	...	1	2	1	...	...	...	...	20
Accumulations of Rubbish removed	1	...	...	...	...	...	...	...	...	...	3	...	1	1	...	...	...	...	...	1	...	...	...	7
Miscellaneous Nuisances	...	...	1	...	1	...	1	...	...	...	3	...	...	1	...	...	...	...	1	...	...	...	1	9
Adequate Ventilation not maintained	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...	...	1	...	...	...	...	...	...	4
Improved Lighting and Ventilation of Workshops provided	...	...	1	...	...	...	...	...	1	...	...	1	...	1	...	...	...	...	...	...	...	...	...	4
Gas Stoves for heating irons, or other Gas Appliances, ventilated	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2
Roofs, Walls, Ceilings, Floors, Windows, Doors, &c., repairs effected	...	...	3	...	4	...	...	...	1	2	4	3	2	...	1	...	1	2	...	3	1	...	...	27
Walls, Floors, Partitions, &c., of W.C. Compartments repaired	1	...	...	...	...	...	...	1	...	...	3	1	...	...	...	2	...	...	...	...	...	...	...	8
Sanitary Accommodation introduced	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	3
Separate Sanitary Accommodation for Sexes provided, or access arrangements made for this provision	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	3
Intervening Ventilated Lobbies provided at W.C.'s or W.C.'s removed to more sanitary situations	1	...	...	...	...	1	...	...	1	...	2	1	...	...	...	...	...	...	...	...	...	...	...	6
Water Closets, Urinals, and Flushing apparatus repaired, or insanitary urinals removed	1	2	1	...	...	...	1	1	...	...	2	...	...	1	1	...	2	...	1	1	...	...	...	14
Water Closet pedestals renewed, or new apparatus substituted	2	...	...	...	1	...	...	...	1	1	...	...	...	...	1	1	1	...	...	...	...	...	...	8
Water Closets lighted and ventilated, or where insufficient, improvements effected	...	...	...	...	1	...	2	1	...	...	...	...	...	...	...	1	1	...	...	1	...	...	...	7
Drains, Water-pipes, Waste-pipes, Rainwater Conductors—chokes cleared and general repairs effected	...	...	...	...	...	...	...	1	1	2	2	...	1	2	1	1	...	2	...	1	...	...	...	14
Water Supply or Sink Accommodation introduced	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	2
Main Water Supply introduced	...	...	...	...	1	1	1	...	...	...	...	...	...	1	1	...	...	...	...	1	...	...	...	6
Insanitary Sinks—new fittings substituted	...	...	...	...	1	...	...	...	1	...	1	2	...	2	1	...	...	...	...	...	...	...	...	8
Sinks or Stand-pipes removed to more sanitary situation	...	...	...	...	...	...	...	1	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...	4
Sinks repaired or woodwork renewed	...	...	...	...	...	...	1	...	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	5
W.H. Basin renewed or introduced	...	...	...	...	...	...	1	...	...	...	2	...	...	...	...	2	...	...	...	...	1	...	...	6
Failure to affix Abstract (Sec. 133), reported to H.M.I.	...	...	2	1	2	...	...	...	1	...	2	1	...	1	...	2	2	1	...	...	...	...	1	16

TABLE showing the distribution of Bakehouses throughout the City, the irregularities and defects found and remedied, and the general improvements in 1929.

	I. Calton.	II. Canongate.	III. Newington.	IV. Morningside.	V. Merchiston.	VI. Gorgie.	VII. Haymarket.	VIII. St. Bernard's.	IX. Broughton.	X. St. Stephen's.	XI. St. Andrew's.	XII. St. Giles.	XIII. Dalry.	XIV. George Square.	XV. St. Leonard's.	XVI. Portobello.	XVII. South Leith.	XVIII. North Leith.	XIX. West Leith.	XX. Central Leith.	XXI. Liberton.	XII. Colinton.	XXIII. Corstorphine and Cramond.	TOTAL.
Number of Bakehouses on Register at 31st December 1929:—	4	6	8	5	8	7	5	4	7	7	7	11	9	13	14	9	8	8	5	5	2	2	2	156
Underground	3	2	3	4	5	2	2	...	3	5	3	5	5	8	7	5	4	3	...	1	...	...	...	70
Level	1	4	5	1	3	5	3	4	4	2	4	6	4	5	7	4	4	5	5	4	2	2	2	86
Factories	3	3	6	5	6	6	4	4	7	3	4	7	8	9	5	7	7	4	3	5	...	2	1	109
Workshops	1	3	2	...	2	1	1	...	...	4	3	4	1	4	9	2	1	4	2	...	2	...	1	47
Premises converted into Factories, during the year, by the introduction of Electrical Machinery	...	...	...	1	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	3
Number of Inspections made	9	14	15	14	15	21	14	12	16	17	17	29	24	36	37	19	17	21	10	12	4	4	3	380
Electric Lighting installed in Bakehouses	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	2
Miscellaneous Improvements: for storage of fuel, old outhouses demolished, or Courtyard surfacing reconditioned	...	...	...	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	3
Floors, Walls, Ceilings, Roofs, Windows, Doors, Stairways, &c., of Bakehouses and W.C. Compartments, repaired	1	...	...	1	1	...	1	5	1	...	1	...	1	3	3	4	...	1	1	1	1	...	...	26
Improved Ventilation provided in Bakehouses	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	1	...	...	...	3
Statutory period for Limewashing exceeded, or Limewashing unsatisfactory	2	...	...	...	1	2	...	1	...	1	1	3	1	...	1	...	1	...	1	1	...	...	...	16
Dirty Courtyards, Floors, Windows, Furniture, Fittings, &c.	4	...	...	...	...	2	1	1	...	3	3	2	3	1	5	1	2	4	1	1	...	...	...	34
Dirty W.C. Basins and Floors	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	2
Bakehouse Insect Pests exterminated	...	2	1	1	1	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	7
Accumulations of refuse, or old scrap material (wire trays, tins, &c.), removed	1	...	1	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...	5
Material stored where liable to contamination	...	...	...	...	...	...	...	...	1	1	...	...	...	1	...	...	...	...	...	...	...	...	...	3
"Main" Water Supply introduced	...	...	2	...	...	1	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	1	7
Washing Facilities for workers provided in Bakehouses	...	...	...	...	2	...	...	...	...	1	...	...	...	1	1	...	1	...	...	...	...	...	...	6
Hot Water Supply laid on to fittings serving as Washing Facilities	1	...	...	...	...	...	...	...	...	1	...	1	...	1	1	...	1	...	...	...	...	...	...	6
Wash-hand Basins renewed or additional ones installed	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Waste Pipes, Water Pipes, R.W. Conductors, &c., repaired	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2
Sinks—Fireclay sinks provided in place of iron appliances	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	...	...	...	4
Sinks repaired, or Insanitary fittings removed	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	2
Sanitary Accommodation: Removed to more sanitary situation	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Sanitary Accommodation: New Apparatus substituted or pedestals renewed	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2
Sanitary Accommodation: Additional accommodation provided	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Sanitary Accommodation: Flushing Apparatus, &c., repaired	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Matters referred to District H.M.I. of Factories for his attention	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Miscellaneous Complaints remedied or abated	...	...	...	1	...	...	...	...	...	...	1	1	...	1	1	...	...	...	...	1	...	...	...	6

Sanitary Department,
Public Health Chambers,
Johnston Terrace,
Edinburgh, *May* 1930.

To

The Department of Health for Scotland and
The Right Honourable the Lord Provost,
Magistrates, and Council of the City of Edinburgh.

My Lord Provost and Gentlemen,

I have the honour to present the Annual Report of the Sanitary Department of the City of Edinburgh for the year 1929.

HOUSING.

Improvement Schemes.—The progressive campaign of the Corporation for the abolition of the slums was advanced a further stage during the year by the promotion of the St. Leonard's (2nd Section) Improvement Scheme. This is the largest scheme yet undertaken by the Local Authority, as well as the largest so far in the country, and comprised 1,606 houses with a population of 5,569 persons.

This scheme dovetails naturally into the Cowgate-Grassmarket and St. Leonard's (1st Section) Schemes already confirmed by the Department of Health, and will result in large tracts of congested and insanitary properties on the streets lying beyond both sides of the South Bridge, Nicolson Street and Clerk Street, being cleared. The tenants and their families will be transferred to brighter and better conditions provided for them either at the new housing areas on the outskirts of the City or in the smaller number of new houses to be erected on the cleared areas.

The preparation of a scheme of this magnitude involved a large amount of preliminary investigation requiring the systematic visitation of the houses, the noting of particulars as to number of apartments, occupiers, rentals, etc., for the Book of Reference and the preparation of detailed reports upon the sanitary condition of the houses.

The conditions found were those usually associated with the grouping together of blocks of houses in a more or less haphazard fashion with consequent site overcrowding, congestion and overshadowing. Many of the properties were affected by considerable disrepair and dilapidation, dampness, want of through ventilation, insufficiency or unsuitability of sanitary arrangements and the lack of other domestic conveniences. There was considerable sub-division of former larger houses into smaller ones, and there were tenements having 32, 36, 37 and 40 houses with populations of 107, 109 119 and 116 persons respectively.

Many of the houses were very small, and 44 per cent. of the occupied houses consisted of only one apartment. There were houses whose cubic capacity was as low as 700 to 760 cubic feet, and as the legal standard is 400 cubic feet per person it will be understood how extremely uncomfortable and debasing the occupation of such a house by a family must be. Taking as a standard two adult persons to each apartment (two children under 10 years being counted as one adult) it was found that 543 houses, or approximately 33 per cent., did not comply with that standard. Of that number 294 were one-apartment houses ; 221 two-apartments ; 26 three-apartments, and 2 four-apartments.

Good progress continues to be made with the removal of the tenants from the houses in the Schemes previously confirmed. In the Cowgate-Grassmarket Scheme only

two houses remain occupied out of a total of 467 occupied houses. The majority of the tenements have been demolished and the sites either left clear or new tenements erected on them.

All the houses in the Leith Scheme have been vacated and the demolition of the buildings is proceeding apace.

In the Canongate-Corstorphine Scheme 49 houses were still occupied at the end of the year, but several of the vacated properties have been demolished. One new tenement in Greenside Row and two in Corstorphine were in course of erection on the cleared sites.

Only about 80 houses out of the 717 occupied houses in the St. Leonard's (1st Section) Scheme were still in occupation at the end of the year, the dispossessed tenants having been removed to Prestonfield and elsewhere. Several tenements have been demolished, mostly in East Crosscauseway and Cowan's Close district, and the prospective benefits of improved light and air in these localities are already making themselves evident.

Supervision of re-Housing Areas.—The new houses in the re-housing areas have been kept under constant supervision by the Women Sanitary Inspectors with the view of having them kept clean and in proper order and to prevent overcrowding and subletting. The good results that have attended the regular and systematic visitation of the houses have proved the wisdom of this policy. A vast improvement has been effected in the general conditions, even by those who, at first, showed signs of lack of adjustment to their new surroundings. Although there are several instances where there is still room for betterment, it is a pleasure to state that the majority of the occupiers have given gratifying response to the new claims made upon them and are keeping their houses and gardens in very good order.

The visits have been welcomed by the occupiers and a close bond of good-will and co-operation has been established between them and the Inspectors. Appreciation is freely expressed by the occupiers as to their bright, airy houses, open spaces and beautiful surroundings and the improved comfort and health they and their children are deriving. It is quite apparent that many of the occupiers have denied themselves small pleasures in order to save a little money to buy extra furnishings to beautify their new homes and there appears to be a spirit of rivalry in the pride taken in their gardens.

So much has been said of a discouraging nature by misguided persons, without full knowledge of the facts, about the transferred tenants creating new slums in the re-housing areas, that one is compelled to say something in defence of these occupiers.

One welcomes the elevating efforts made at these re-housing areas by various organisations including the Churches, University Settlement, Y.W.C.A., etc., which are proving most helpful. In these endeavours the fact is realised that the people have been transferred to quarters some distance removed from former attractions and suitable means of recreation are provided to take their place. These commendable efforts deserve every encouragement.

Uninhabitable Houses.—In addition to the inspections in connection with the Improvement Schemes, 849 houses were inspected in terms of the Housing (Inspection of District) Regulations (Scotland), 1928, and of that number 274 were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation. Representations were made to the Local Authority in connection with 115 houses and on these Closing Orders were made.

This represents only a very small proportion of the uninhabitable houses in the City which have not been earmarked for inclusion in future Improvement Schemes, but as was pointed out in the Report of last year, very little progress can be made in

closing them until some scheme of alternative accommodation on a large scale is devised for the re-housing of the dispossessed tenants at rentals which they can pay. It is hoped that the provisions of the new Housing Bill, at present before Parliament, will assist Local Authorities in this connection.

Housing Repairs.—By means of the provisions of Section 3 of the Housing (Scotland) Act, 1925, which enable the Local Authority to call upon owners of working-class houses to make them in all respects reasonably fit for human habitation, many improvements and repairs have been effected during the year. These, however, would have been more numerous but for the fact that, as was pointed out in the Report of last year, many difficulties are encountered in applying this Section of the Act.

These difficulties are met with most frequently in dealing with tenemental properties where improvements of a substantial nature are necessary and more particularly where such faulty conditions as over-subdivision, back-to-back arrangement of houses, and the inadequacy of watercloset accommodation require to be dealt with. Indeed, numerous properties were inspected, but owing to the limitations of the Act, the improvements have had to be deferred until the Local Authority have the necessary power for overcoming the difficulties.

The repairs effected were in most cases, done without the service of a statutory notice, an informal intimation having the desired effect. In one case, however, involving a property consisting of three cottages, the owner failed to execute the works required in the Notice, and, in consequence, Closing Orders were made in respect of the houses.

Improvements in connection with several properties involving considerable expenditure have been arranged with the owners, but for various reasons, the time specified for the execution of the work has been extended for a limited period.,

Rural Housing Improvement.—Advantage was taken of the provisions of the Housing (Rural Workers) Act, 1926, by the owners of 14 farm and other rural cottages and the improvements effected consisted of the provision of bathrooms, sculleries, drainage, improved lighting, and repairs to floors, walls, roofs, etc. Work is also in progress at other cottages in the outlying districts of the City and improvements are under consideration in connection with a further number of cottages.

NUISANCES AND SANITARY IMPROVEMENTS.

The District Inspectors have again had a busy year in furthering the interests of domestic sanitation. Besides the improvements already mentioned, continued progress was made in improving the sanitary arrangements of those houses which were inadequately provided with suitable conveniences. Thus, in 115 instances new waterclosets were introduced, either to make up a deficiency or to replace those of an antiquated type, and 368 were improved or repaired ; 134 earthenware sinks were introduced either where these were absent or to replace corroded iron appliances, and repairs to the existing woodwork, etc., around sinks were effected in 243 instances ; renewals or repairs of drainage were effected at 46 properties, and in 124 instances the soil pipes, in 205 instances the waste pipes and in 49 instances the rain-water conductors were repaired or renewed.

Much damage is done to property by carelessness in the use of sanitary appliances, particularly those used in common by a number of tenants. No less than 198 choked waterclosets, 78 choked sinks, wash tubs, etc., and 762 choked drains had to be brought to the notice of the parties responsible and cleared.

The Table shewing the number of sanitary conveniences used in common has been brought up to date as follows :—

	Number used in common by the Tenants of										Total Number of Conven-iences.	Total Number of Houses.
	2 Houses.	3 Houses.	4 Houses.	5 Houses.	6 Houses.	7 Houses.	8 Houses.	9 Houses.	10 Houses.	16 Houses.		
mmon Water-closets	4,498	1,457	781	125	54	4	6	2	...	...	6,927	17,534
mmon Sinks . .	357	318	198	53	20	5	6	...	...	...	957	2,988
mber of houses without Sink or water supply within the house and without the use of a common Sink . .	...	...	...	...	...	...	...	...	...	...	...	824
y Closets . .	115	9	5	2	...	...	...	...	...	...	131	287
ivy Middens . .	...	...	...	...	...	...	1	...	...	6	7	104
hpits . . .	21	8	9	5	6	1	2	1	2	...	55	215

There still remain 359 dry closets (inclusive of the number referred to in the above Table as being used in common) and 7 privy middens. There is a decrease of 8 dry closets as compared with last year. These conveniences are mostly situated on the outskirts of the City where sewers have not been provided. On account of the demolition of properties under the various Housing Improvement Schemes, and improvements effected at other properties, the number of houses where W.C.'s were used in common was reduced by 389, and the number where sinks were used in common was reduced by 150. The number of houses without sink or water supply within the house and without the use of a common sink has been reduced by 12.

Dampness in 46 houses was abated ; defective or obstructed vents gave rise to smoke in houses on 83 occasions ; and escapes of gas, dead vermin, etc., caused nuisances in 77 houses. Complaints of flooding in houses in 81 cases were found to be due to defects in flats above, or burst pipes caused by frost.

Other defects of structure in dwelling-houses required considerable improvements, including repairs to 222 floors, hearths, doors, partitions, etc., 271 walls and ceilings, 235 windows and skylights, 41 defective roofs, 69 grates or ranges and 35 coal bunkers.

Complaint was made by tenants on 120 occasions of nuisance committed in common stairs and back-greens by dogs and cats, and on 36 occasions to the keeping of animals or poultry within or in close proximity to dwellings.

In the course of the inspection of dwelling-houses, the floors and bedding in 165 instances were found in a dirty condition and the tenants were required to carry out the necessary cleansing. In 297 houses the walls and ceilings required distempering, papering or painting.

It is gratifying to observe the use of lighter colourings in the painting and papering of the walls of houses. The benefits of this practice in brightening the interiors of homes was demonstrated at the Health and Hygiene Exhibition which was held under the auspices of the Corporation.

After the service of notices from the Department the owners of 1,309 properties had the common stairs painted. The sweeping and washing of stairs and passages was found in 1,159 instances to have been neglected and insistence had to be made on compliance with the regulations.

Although there has been steady improvement throughout the City in the matter of domestic cleanliness the filthy habits of many occupiers are constantly revealed by the practice of casting garbage out of windows on to the back courts, areas and roofs of out-buildings, and refuse which should be taken to the street in the early morning is often found deposited in cellars, vacant houses and other odd corners. In all 1,796 accumulations of garbage and filth in those places had to be removed either by the owners or the Cleansing Department.

At the recent Health and Hygiene Exhibition an effort was made by the use of posters, photographs, etc., to demonstrate to the public the dirty conditions caused by these careless habits, and, by way of contrast, the more healthful conditions where proper attention is paid to cleanliness.

Ticketed Houses.—These small houses, as well as the other houses that are unticketed in the same tenements, are visited periodically by the Women Sanitary Inspectors in order to see that the general cleanliness, including the bedding and clothing, as well as the stairs, passages and courts, is properly maintained. Over a period of years, as a result of this supervision, steady improvement has been effected in the domestic conditions. In the course of visiting opportunities are often afforded the Women Inspectors of giving help, advice and encouragement, which is greatly appreciated. Altogether 18,566 visits were made.

Overcrowding.—It is pleasing to note a further reduction in the number of recorded cases of overcrowded houses. Three years ago 1,640 cases of overcrowding came to the notice of the Department, and a year ago the number was reduced to 1,323, while for the year under report the number fell to 1,193. The reduction has been partly due to the progress made with Improvement Schemes and partly to the tenants securing larger houses.

While much of the overcrowding was caused by the size of the family in residence, in 132 cases it was either due to or aggravated by the keeping of lodgers or the subletting of rooms to other families.

Of the 1,193 overcrowded houses found, 770 were of one apartment, 393 of two apartments and 30 of three apartments and over.

In the one-apartment houses the overcrowding in 190 instances was by one person, in 300 by 2 persons, in 187 by 3 persons and in 93 instances by 4 or more persons in excess of the number allowed.

In the two-apartment houses the overcrowding in 100 instances was by one person, in 119 by 2 persons, in 72 by 3 persons, and in 102 by 4 or more persons over the number allowed.

The three-apartment houses were in 4 instances occupied by one person in excess, 7 by 2 persons, 11 by 3 persons and 8 by 4 or more persons.

In the one-apartment overcrowded houses as many as 7 to 12 persons were found in residence, and in the two-and three-apartment houses as many as 15, 16 and 17 persons were found.

In 137 instances the air space per person had been reduced to below 200 cubic feet being less than half of what has been recognised as a very low standard, namely, 400 cubic feet.

In individual cases the air space had been reduced to the extremely low figure of from 103 to 133 cubic feet per person respectively.

The following are a few examples of the conditions that were found :—

(*a*) A two-apartment house in Leith, with accommodation for 7 persons, was found to be occupied by the tenant, his wife and family, namely, 5 daughters and 7 sons, and also by 2 female lodgers, making a total of 16 persons.

(*b*) A one-apartment house in Leith, with accommodation for 3 persons, was found to be occupied by the tenant, his wife and family, namely, 3 daughters, aged 19 years, $2\frac{1}{2}$ years, and 6 months, and 3 sons, aged 20, 16 and 8 years, making a total of 8 persons.

(*c*) A two-apartment house in the centre of the City, suitable for not more than 5 persons, was found to be occupied by the tenant, his wife and family, namely, 5 daughters whose ages ranged from from 4 to 21 years, and 6 sons aged 2 to 20 years, making a total of 13 persons.

(*d*) In Portobello a sublet room, with accommodation for 3 persons, was occupied by a man, his wife and family, namely, 5 daughters aged 2 to 16 years, and 4 sons aged 8 to 14 years, making a total of 11 persons.

Increase of Rent, etc., Acts.—Nine applications were received from occupiers of houses for certificates in terms of the Rent and Mortgage Interest (Restrictions) Acts, 1920-23, that their houses were not in all respects in a reasonable state of repair.

In one of the houses the disrepair was such that a certificate could be granted, but in the remainder of the houses the extent of the disrepair did not warrant the granting of certificates.

Upon the owners being given notice of the items of disrepair in the respective houses, repairs were effected.

LODGING HOUSES.

Common Lodging Houses.—At the beginning of the year there were 18 common lodging houses in the City with accommodation for 2,185 lodgers. Of that number 15 houses were used for male lodgers and 3 were reserved for women lodgers. All the lodging houses are privately owned with the exception of one in Leith owned by the Corporation.

During the year one lodging house in the City, having accommodation for 12 male lodgers, was voluntarily vacated and another house, with accommodation for 96 lodgers, situated in the Leith area, was closed by the Public Health Committee as being unsuitable.

At the end of the year there were on the Register 16 common lodging houses with accommodation for 2,087 lodgers.

Farmed-Out Houses and Houses Let-in-Lodgings.—The farmed-out houses in the City at the beginning of the year numbered 76, with accommodation for 276 persons.

During the year 4 houses with accommodation for 17 persons were removed from the Register. These houses were the subjects of Closing Orders and were vacated.

The houses let-in-lodgings in the City at the beginning of the year number 21, with accommodation for 706 persons.

During the year 3 houses with accommodation for 54 persons were removed from the Register. Two of these houses were the subjects of Closing Orders and were vacated, while in the other case the occupancy of the house as a house let-in-lodgings was voluntarily discontinued.

Accommodation for Seasonal Workers.—The number of farmers employing seasonal workers last summer was 18, and the number of workers was approximately 381.

Visits to these respective classes of lodgings were regularly paid by the Inspectors, both by day and by night, to ascertain if the Bye-laws were being observed, and any irregularities were brought to the notice of those responsible and immediately rectified.

PLACES OF PUBLIC ENTERTAINMENT.

Visits were frequently paid by the Inspectors to picture houses, theatres and other places of public entertainment and as a rule the cleanliness and sanitation of the premises were found to be well looked after and there was little that required to be brought to the notice of the management.

Tests were also made in many of the picture houses, etc., by means of the Kata-Thermometer to ascertain the condition of the atmosphere and the sufficiency of the ventilation. In the majority of cases the conditions were found to be satisfactory, although there was a tendency in some of the picture houses to allow the air temperature to rise too high and to keep the fans shut off for considerable periods, especially on the colder nights. The excuse usually made was that the patrons complained of the cold draughts, and in cases where the air is drawn direct from the outside without any preliminary warming this draughtiness is difficult to obviate. In the picture houses where the plenum system is in operation preliminary warming of the air is effected, but in many of the older premises it would be difficult to introduce this system.

There is need for the adoption of some standard of heating and ventilation which could be enforced in all places of public entertainment.

VERMIN REPRESSION.

Verminous Children.—By arrangement with the Education Authority an Inspector of this Department visits the houses of verminous and dirty children attending the schools in the City. During the year 182 cases involving 263 children came under his supervision, and the action taken resulted in the disinfection of 76 sets of bedding and the bathing of 189 children at the City Disinfecting Station.

Verminous Houses.—In other cases of vermin-infested houses co-operation with owners and occupiers in the work of disinfestation was again given. 234 houses were dealt with and 102 sets of bedding were removed to the City Disinfector.

Rat Destruction.—Much success continues to follow the regular efforts for rat extermination. Complaints and investigations showed that 416 premises, including farms, derelict buildings, cellars, etc., were infested during the year. 232 premises were cleared of the vermin.

Over 10,000 poisonous baits were laid down along streams and embankments and in condemned properties and disused basement cellars, etc.

One of the worst cases dealt with involved an expenditure of almost £2,000. The continued infestation of a number of tenements necessitated the taking out of an 18-inch sewer, which was found to be faultily constructed, and the laying of a modern 9-inch pipe sewer. All the branch drains to the tenements had also to be renewed.

Frequent complaints were made of rats harbouring below wooden coal-boxes and huts erected in the back gardens of new suburban bungalows. This can be remedied by lifting these erections 18 inches clear of the ground and supporting them by small brick piers, as rats will not usually harbour where daylight has free access.

As in former years the Local Authority co-operated with the Department of Agriculture in an intensive campaign for rat destruction during the week commencing 1st to 6th April, and very good results were obtained

SMOKE ABATEMENT.

The efforts towards Smoke Abatement continue to make good progress. Daily supervision of the chimneys of the various works and manufactories throughout the City is made by the Inspectors, and when necessary, visits are made to the boiler-houses

and the firemen instructed or warned. The number of these visits averages about 300 per month. In many cases it is found that inexperienced men or boys are employed as firemen, and when they have been drilled into a proper method of working their furnaces they leave, and the whole process has to be gone over again.

A class on Smoke Abatement and Fuel Economy for firemen and engineers was held last winter at the Heriot-Watt College, conducted by the Senior Smoke Abatement Inspector, and the attendance was very satisfactory.

New and improved boiler plant has been provided in many cases to take the place of worn-out and inefficient appliances. One firm has installed four new Lancashire Boilers fitted with the "Underfeed" Stoker system, which is a very efficient smoke-consuming plant, comprising mechanical stoking, together with auxiliary draught provided by a motor-driven fan.

In two instances vast improvement has been effected by the introduction of electric power to assist the steam-raising plant. In addition to the "Underfeed" Stoker, several firms have adopted a smoke consumer of a less elaborate type, which consists of a method of introducing auxiliary air at the back of the boiler furnace, thus augmenting the ordinary natural draught.

It has been found practicable to substitute coke for ordinary bituminous coal in certain boiler furnaces, and in two particular instances very satisfactory results have been obtained by this means, which, however, entail very considerable additional expense to the parties concerned.

Local improvements have been effected by the heightening of existing chimneys in twenty-five different cases. These chimneys were mostly in the immediate vicinity of dwelling-houses, and the additional height provided has been sufficient to carry the products of combustion clear of adjoining windows.

Careful supervision has been given to the locomotives at the different railway stations, depots, and shunting yards. Warning notices are posted there, and the Superintendents are instructed to see that attention is given by drivers and firemen. Far too much smoke, however, is still discharged from railway engines within the City.

Steam wagons traversing the public streets are also strictly supervised, and by the use of semi-anthracite fuel the smoke emitted by these vehicles has been largely reduced.

The campaign for substituting coke for soft fuel in heating furnaces of the "Robin Hood" type, which are largely in use in hotels, clubs, shops, banks and offices for central heating, has been continued with satisfactory results, and has been extended, as mentioned above, to larger types of boiler plant.

As regards domestic fires the smoke from which contributes so largely to the air pollution of the City, there has been a gratifying increase in the use of gas and electrical appliances and of solid smokeless fuel. The cheapening of those improved methods of domestic heating would go far towards solving this difficult problem.

The measurement of the solid impurities in the air of the City is continued by the use of three standard gauges—one at Princes Street Gardens, one at Leith Links, and one at the Usher Institute, and the following Tables show the results at these places from month to month. The results fluctuate according to the weather—presence of fog, etc., and increase directly with the number of rainy days.

The following Table shows the results at the various places from month to month :—

Month.	Station.	Millimetres of Rainfall.	Total Insoluble Matter.	Total Soluble Matter.	Total Solids.	Total Solids.
			Metric Tons per Sq. Kilometre.	Metric Tons per Sq. Kilometre.	Metric Tons per Sq. Kilometre.	English Tons per Sq. Mile.
January .	Leith Links . .	15·85	2·78	2·09	4·87	12·46
	Usher Institute .	24·17	2·33	3·97	6·30	16·13
	W. Princes St. Gds.	16·88	6·08	1·89	7·97	20·40
February .	Leith Links . .	17·93	2·21	1·14	3·35	8·58
	Usher Institute .	26·19	2·05	3·88	5·93	15·18
	W. Princes St. Gds.	Bottle	broken.	...	...	...
March .	Leith Links . .	5·56	4·08	1·16	5·24	13·41
	Usher Institute .	5·06	2·92	0·97	3·89	9·95
	W. Princes St. Gds.	6·48	7·88	13·79	21·67	55·47
April . .	Leith Links . .	31·14	4·92	2·18	7·10	18·18
	Usher Institute .	43·61	3·16	2·01	5·17	13·24
	W. Princes St. Gds.	40·23	8·12	2·41	10·53	26·96
May . .	Leith Links . .	48·65	4·63	4·09	8·72	22·32
	Usher Institute .	39·56	3·20	2·46	5·66	14·49
	W. Princes St. Gds.	49·41	6·43	2·86	9·29	23·78
June . .	Leith Links . .	42·12	5·32	1·85	7·17	18·36
	Usher Institute .	60·35	8·18	150·26	158·44	405·61
	W. Princes St. Gds.	55·49	6·28	1·89	8·17	20·92
July . .	Leith Links . .	57·69	4·22	2·20	6·42	16·43
	Usher Institute .	54·00	7·14	1·41	8·55	21·89
	W. Princes St. Gds.	54·00	7·48	2·27	9·75	24·96
August .	Leith Links . .	110·78	4·57	9·52	14·09	36·07
	Bruntsfield House .	108·68	2·63	4·56	7·19	18·40
	W. Princes St. Gds.	103·28	5·40	3·71	9·11	23·32
September	Leith Links . .	8·09	4·16	2·58	6·74	17·25
	Bruntsfield House .	7·83	2·25	1·00	3·25	8·32
	W. Princes St. Gds.	8·98	3·59	1·08	4·67	11·96
October .	Leith Links . .	60·74	2·82	2·43	5·25	13·44
	Bruntsfield House .	72·63	2·82	2·62	5·44	13·92
	W. Princes St. Gds.	65·34	4·35	2·74	7·09	18·15
November	Leith Links . .	73·11	2·36	4·09	6·45	16·51
	Bruntsfield House .	68·31	2·01	1·63	3·64	9·32
	W. Princes St. Gds.	66·69	4·64	2·14	6·78	17·36
December	Leith Links . .	80·34	1·64	1·76	3·40	8·70
	Bruntsfield House .	82·08	1·86	1·80	3·67	9·40
	W. Princes St. Gds.	87·48	3·52	3·32	6·84	17·51

OFFENSIVE TRADES.

The following is a list of the Offensive Trades carried on in the City :—3 tanners, 6 hide and skin factors, 1 gut scraper, 1 glue and size maker, 2 skinners, 1 soap boiler, 3 tripe cleaners, 6 manure manufacturers, 2 tallow melters, and 1 fish meal manufacturer, making a total of 26.

The works were inspected frequently in order to see that the requirements of the Bye-laws were being attended to.

Complaint was made on several occasions about offensive smells alleged to be emanating from a fish meal factory at Granton. This business had been only recently commenced, and certain parts of the process, particularly those dealing with the prevention of effluvia, required improvement. The attention of the owners was called to the complaints and repeated observations and inspections were made with a view to improvement.

FOOD SUPERVISION.

Food Handling.—The survey of places where food is prepared and sold was continued with a view to the improvement of the general hygienic conditions.

Although considerable improvement has been effected in the methods of handling and exposing foodstuffs in shops and other food premises, a great deal remains to be done. As was pointed out in previous reports this could be assisted by the enforcement of suitable regulations applicable to the various processes.

An effort was made in the recent Health and Hygiene Exhibition to show the citizens how by the use of covered utensils foodstuffs could be protected from contamination in the home.

Milk Supply.—The number of registered dairy keepers, including hawkers, at 1st January 1929, was 490. During the year applications for registration in respect of 6 premises were received and granted, while registration certificates referring to 9 dairy premises and 3 hawkers were cancelled, the sale of milk having been discontinued. The occupier of one dairy, which was provisionally registered, has now been fully registered. The total of 484 dairies, including hawkers, at the end of the year showed a reduction of 6.

The total approximate daily sale of milk of all classes was 24,880 gallons—equivalent to an average amount of about half-a-pint per person—and of this amount 68 per cent. is sold in bottles.

Deducting the amount of milk supplied in bulk to institutions, etc., it is found that there is still 25 per cent. of the total daily supply passed on to the consumer otherwise than in bottles.

There was again a gratifying increase in the sale of the special grades of milk. The amounts of these specially designated milks now sold daily within the City are—371 gallons of "Certified", 524 gallons of "Grade A (Tuberculin Tested)," and 86 gallons of "Grade A." In addition 14,562 gallons of milk are "Pasteurised," although only a small proportion of this is sold under licence, making a total of 15,543 gallons, or about 62 per cent. of the total daily sale of milk.

The Local Authority has granted licences to 217 dealers for the sale of the various grades of milk under the Milk (Special Designations) Order (Scotland), 1923, 85 being for "Certified," 53 for "Grade A (Tuberculin Tested)," 6 for "Grade A," and 73 for "Pasteurised." This is a decrease of 20 from the number for the previous year, doubtless due to the milk business gradually passing into the hands of large concerns.

Ice Cream.—The number of premises registered for the sale of ice-cream is 259.

Twenty samples of ice-cream were procured from shop premises, etc., in the City, for the purpose of analysis, in order to determine the quantity of milk fat present. These were reported as containing an average amount of 3.62 per cent., which is an improvement on last year's figure of 3.12 per cent.

Three new applications were received from shopkeepers desiring that samples should be taken at their premises with a view to obtaining the certificate which is awarded to venders whose ice-cream contains 3 per cent. of milk fat. This was granted to two of the applicants, the other being unsuccessful as the samples analysed failed to comply with the requisite standard.

The amount of milk fat in ice-cream varies so much that there is need for prescribing a standard, or for adopting a classification for different grades of ice-cream.

PREVENTION OF FOOD ADULTERATION.

During the year the total number of samples submitted for analysis under the Food and Drugs (Adulteration) Act, 1928, was 1,809, consisting of 697 Statutory and 1,112 informal samples, the former representing 74 different articles of food and drugs. This shows a rate of 4.23 per 1,000 of the population.

Dr A. Scott Dodd, B.Sc., Ph.D., F.R.S.E., the City Analyst, reported 633 or 91 per cent. as being genuine, and 64 or 9 per cent. as not being in conformity with the statutory requirements.

Milk.—As in former years the number of samples of sweet milk is larger than that of any other article of food and the number of statutory samples taken for chemical analysis was 161, while in addition 124 were procured at shops and railway stations for bacteriological examination by the Veterinary Department, the particulars of which appear in the annual report of the Chief Veterinary Inspector.

Of the total of 161 Statutory samples, 129 were reported as conforming to the standard specified in the Sale of Milk Regulations and 32 as being adulterated either by the abstraction of fat or by the addition of water, or both.

The average amount of milk fat, calculated from all the Statutory samples including those certified as being adulterated, shows the creditable figure of 3.51 per cent., and is distinctly higher than the present presumptive standard, viz., 3 per cent.

While the degree of adulteration was, in most cases, comparatively small, there was one instance of a very serious nature which is worthy of mention. This occurred in the month of June and the consignment of sweet milk from which the samples were taken represented 70 gallons, being sent by motor into the City from a farm in Lanarkshire. As there were 40 gallons labelled "morning" milk and 30 gallons "evening" milk, a separate sample was taken from each supply, and the City Analyst reported the former as being deficient in fat to the extent of at least 20 per cent. and containing at least 24 per cent. of added water, and the latter as being deficient in fat to the extent of at least 14 per cent. and containing at least 26 per cent. of added water. The explanation offered by the consignor was to the effect that the cows had been put out on the grass which was of very poor quality and were not receiving any artificial feeding, while in addition *a leakage had been detected* in the milk cooler. The accused was convicted and fined £8.

During the year it was found necessary to take legal proceedings against 3 offenders. In each case these were successful and a total amount of £16 was imposed in Fines.

The Milk (Special Designations) Order (Scotland), 1923.—The increasing demand each year for the different grades of milk specified in the above Order entails the necessity of having every producer's supply submitted for analysis at frequent intervals, and, with very few exceptions, samples were procured in each month during the year from the various sources supplying the City and sent to the Public Analyst for chemical examination.

In regard to the principal designations, viz., " Certified," and " Grade A (Tuberculin Tested)," consignments were received from a wide area, the farms being distributed over 7 different counties in Scotland and 2 in the north of England.

The total number of samples taken was 215, comprising 105 of " Certified," 62 of " Grade A (Tuberculin Tested)," 12 of " Grade A," and 36 of " Pasteurised " milk.

A detailed statement is submitted showing the number of samples taken in each month of the year under the various designations, along with the average amount of butter fat found present :—

Date.	" Certified."		" Grade A (T.T)."		" Grade A."		" Pasteurised."	
	No. of Samples.	Butter Fat. Per Cent.	No. of Samples.	Butter Fat. Per Cent.	No. of Samples.	Butter Fat. Per Cent.	No. of Samples.	Butter Fat. Per Cent.
January . .	8	3·90	5	3·65	1	4·03	3	3·87
February . .	9	3·72	7	3·89	1	3·85	3	3·24
March . .	8	3·60	6	4·11	1	3·66	3	3·52
April . .	9	3·86	5	3·86	1	3·30	3	3·37
May . .	9	4·18	6	3·92	1	3·52	3	3·54
June . .	9	4·00	3	4·04	1	4·13	3	3·66
July . .	8	3·67	5	3·69	1	4·31	3	3·43
August . .	9	4·09	4	4·10	1	4·32	3	3·82
September .	9	4·05	3	3·88	1	4·16	3	3·70
October . .	8	3·80	7	3·96	1	3·42	3	3·69
November .	11	3·89	5	4·21	1	3·61	3	3·31
December .	8	4·02	6	3·91	1	3·83	3	3·50
Total .	105	...	62	...	12	...	36	...
Average .	...	3·91	...	3·93	...	3·85	...	3·55

A scrutiny of the figures discloses a highly satisfactory state of affairs and the producers are to be congratulated on the standard attained.

It will be seen that the average amount of butter fat found present in every month of the year exceeded the prescribed figure, viz., 3·5 per cent., except in regard to 2 samples of " Grade A," which showed 3·30 and 3·42 per cent. respectively, while the average amount over the whole year in the three leading designations gives the following striking figures, viz., " Certified "—3·91 per cent., " Grade A (Tuberculin Tested) "—3·93 per cent., and " Grade A "—3·85 per cent.

Mince.—As compared with former years the samples of mince taken during the present term show results which indicate that the butchers throughout the City are now more alive to the necessity of complying with the terms of the Preservatives Regulations. Not only has there been a decrease in the number of contraventions but the amount of preservative found present in the various samples shows an appreciable diminution.

The most serious infringement was in regard to a sample of steak mince purchased in the month of July (one of the months in the year in which the addition of preservative is sanctioned). This contained sulphur dioxide equal to 2,000 parts per million by weight, an amount which is inexcusable when compared with the permissible maximum of 450 parts.

Altogether 44 samples were submitted for analysis and 4 of these were reported as not conforming with the Regulations.

Ten prosecutions were instituted in the Sheriff Court and in every case a plea of guilty was tendered, while a total sum of £35 was inflicted in fines and expenses.

Sausages.—The number of samples of sausages purchased during the year is considerably larger than in any previous term, and unfortunately the proportion of these found to contain preservative is greater than formerly. In contradistinction to this, however, it may be mentioned that there is a decided decrease in the quantity of sulphur dioxide found present as compared with the large amounts commented upon in earlier reports.

Altogether 82 samples of various descriptions of sausages were taken for the purpose of analysis and 15 of them were reported on by the City Analyst as containing sulphur dioxide in excess of the fixed standard while 3 contained a prohibited preservative, viz., boric acid.

Legal action was taken against 9 offenders, 8 of whom were convicted and one was acquitted, the sum of £27 being imposed in fines and expenses.

The facts in regard to the prosecution in which the accused person was declared not guilty by the Sheriff are well worthy of being detailed and they may be of interest to other Local Authorities. The facts are as follows :—

A sample of beef sausages purchased on 5th August was analysed by the City Analyst the same day and found to contain sulphur dioxide to the extent of 1,000 parts per million, being 550 in excess of the statutory maximum of 450 parts. After the complaint charging this contravention was served and a plea of not guilty had been tendered, it appeared that the second portion of the sample, viz., that left with the seller, had been analysed by his Analyst on the 14th August and a certificate given to the effect that it contained only 397 parts per million. On this being notified to the City Analyst he stated that the decrease in the amount of the preservative was, in his opinion, quite consistent with his analysis of 9 days earlier in view of the recognised fact that sulphur dioxide is a volatile gas which tends rapidly to disappear, especially when, as in this case, the sample was enclosed in a container which was not hermetically sealed.

It was decided to proceed with the Trial, but in the interim, on 7th November, the Sheriff, on the motion of the Respondent, ordered the third portion of the sample taken on 5th August, and till then retained in the office here, to be sent to the Government Chemist for analysis. This report, dated 18th November, showed that the portion in question contained sulphur dioxide equal to 386 parts per million, and while the Government Chemist stated that the amount of the dioxide tends to diminish during storage, indicated that he had no evidence to show the amount of the diminution or whether the sample originally contained more than the statutory maximum of 450 parts per million. At the trial it was represented to the Sheriff that a failure to convict would probably lead to the Regulations in practice being rendered nugatory—for all that an offending shopkeeper need do to secure immunity was to hold up the analysis of his portion of the sample for a week or two, so that the evaporation of the sulphur dioxide might take effect, with the result that the second and third analyses would, as in this case, show results conflicting with those of the primary one, which was the basis of the prosecution.

The Sheriff, however, would not accept that consideration as being his concern, suggesting that it was a matter for the Authority responsible for the Regulations, and returned a verdict of not guilty as stated.

Other Foods.—Other forms of adulteration in articles of food reported on by the Analyst were beef dripping containing cottonseed oil and two samples of ground ginger containing sulphur dioxide.

One sample of ground ginger contained a very considerable amount of preservative and after communication with the vendor and the wholesale merchants by whom he had been supplied, it was found that the ginger had been in stock before the Preservatives Regulations came into operation. It consisted of " Cochin " ginger, and, from all

accounts, it had been the custom to sulphur this in order to destroy any trace of worm. Since the inception of the Regulations, however, the grinding of cochin ginger has been practically abandoned.

Imported Foodstuffs.—The usual visitation was made to Leith Docks in order to inspect the different foodstuffs arriving from foreign ports and specified in the Regulations as coming under the supervision of the Local Authority. The total number of samples forwarded to the City Analyst for chemical examination was 43, and these represented eleven varieties of food, the major portion having been consigned from America and Denmark. All the samples were found to meet the requirements of the Regulations with one exception, viz., " cured sausage," which was reported as containing, on the outside skin, boric acid to the extent of 80 parts per million. On enquiry it was ascertained that this consignment had been imported for use as " ship's stores," and, therefore, was exempt from the terms of the Order.

THE SALE OF FOOD ORDER, 1921.

The various clauses in this Order, so far as they come within the supervision of this Department, have been amended or revoked from time to time until at the present period there only remain in force those relating to the labelling of certain imported produce.

As in former years, visitation was made of the business premises concerned and it was apparent that, with few exceptions, shopkeepers were alive to their responsibility in observing the terms of the Order. Contraventions were few and, as a rule, a warning was sufficient to ensure against any repetition of the offence, but in two instances it was found necessary to take more drastic action and institute legal proceedings.

The persons implicated were butchers who had exposed for sale by retail, imported meat, without being labelled in accordance with the requirements specified.

One of these tendered a plea of guilty and was fined £3, but the other decided to contest the matter, and the case went to trial. The accused based his defence on the fact that there was a notice hanging on the wall of the shop, in a prominent position, on which was printed " Prime Chilled Beef." As this was suspended above a counter on which there were exposed for sale various portions of " home-killed " and " imported " meat mixed indiscriminately, it was a fair assumption that the notice in question was simply an evasion of the Act.

This view of the matter was confirmed by the decision of the presiding Magistrate, who found the accused guilty and inflicted a penalty of £3.

THE RAG FLOCK ACT, 1911.

For several years the samples taken for the purpose of analysis under this Act have been, with very few exceptions, well within the limit of cleanliness prescribed in the Regulations and this term compares most favourably with any previous period.

Ten samples were taken at the premises of bedding manufacturers in the City and submitted for chemical examination. The reports of the City Analyst showed that in every instance the standard of cleanliness was well within the limit allowed, while in 4 samples the amount of chlorine found present was as low as 2, 6, 6 and 10 parts respectively per 100,000 parts of flock as compared with the permissible maximum of 30 parts of chlorine.

While these results are very gratifying and highly creditable to the manufacturers, attention might again be directed to materials used for similar purposes, and which do not come within the scope of the Act. Samples have been analysed of what is termed

as " the salvage of absolutely new materials," *e.g.*, mill puff, cotton flock, etc., which have shown results in regard to cleanliness considerably worse than any sample of rag flock taken in the City and unquestionably these should also be brought under regulation.

THE POISONS AND PHARMACY ACT, 1908.

There was a slight decrease in the number of applications received for registration under the above Act during the year and these, in every instance, were for renewals of licences which had been previously granted by the local authority. The total number at present on the register is 26 as compared with 28 in the preceding period. The various premises were inspected and it was evident that the terms of the Act were receiving due attention, for although it was necessary to call in question one or two of the licence-holders, this was for offences of a minor nature. Occasionally it happens that orders are received from customers located at some considerable distance, *e.g.*, England and Ireland, and, as it is not practicable for them to attend and sign the Poisons Book, their orders are carefully filed and preserved for future reference if required.

THE FERTILISERS AND FEEDING STUFFS ACT, 1926.

It is regrettable to report that the facilities provided in this Act have not, so far, received the recognition from farmers in the district which was anticipated.

Under the previous Act purchasers had usually hesitated to have samples taken to verify their warranties because these were also statements which might involve criminal proceedings, and in the event of a formal sample taken not complying with the warranty they might find themselves called as witnesses in criminal proceedings against the seller. Under the new Act, however, the warranties are contained in a statutory statement which forms a basis for civil claims only. In these circumstances it was believed that there might be an increasing demand for the analysis of samples but this has not yet materialised.

During the year visits were made to the various premises where scheduled fertilisers and feeding stuffs were prepared for sale or consignment and 8 samples were taken in the prescribed manner for the purpose of analysis by the Agricultural Analyst. All were certified to be of satisfactory composition.

MERCHANDISE MARKS ACT, 1926.

Under this Act provision is made whereby, after an enquiry has been held, " Orders in Council " can be passed in regard to any imported goods requiring that they bear an indication of origin, also as to the form this should take and the manner in which it should be applied to the goods.

In virtue of these powers there came into operation on different dates during the year " Orders in Council " relating to the following foodstuffs :—(*a*) honey, (*b*) currants, sultanas and raisins, (*c*) eggs (in shell) and dried eggs, (*d*) oat products (oatmeal, rolled oats, oat flour and groats).

On visiting the various business premises throughout the City with a view to ascertaining whether the shopkeepers were carrying out the provisions detailed in the specified Orders, it was apparent that this was, with some few exceptions, being well observed, and whenever the attention of those in default was directed to any infringement the requirements were at once complied with.

AGRICULTURAL PRODUCE (GRADING AND MARKING) ACT, 1928.

This Act empowers the Department of Agriculture for Scotland to make regulations for prescribing "grade designations," etc., to indicate the quality of any articles of Scottish agricultural or horticultural produce.

In exercise of these powers there came into force during the year, Grading and Marking Regulations in regard to eggs, ware potatoes and tomatoes.

One of the special provisions as to eggs enacts that any premises used, by way of trade or for the purpose of gain, for the cold storage or chemical storage of eggs, require to be registered with the Local Authority. Under this Section applications were received from three firms in the City requesting that their premises should be examined with a view to registration. These were duly inspected and being found in every way satisfactory Certificates were granted and the names and addresses were entered in the Register in accordance with the Regulations.

Periodical visits were made to stores and shops throughout the City and it was evident that careful attention was being given generally to the terms of the Act and the Regulations made thereunder.

PORT SANITARY INSPECTION.

The boarding and inspecting of vessels arriving at Leith Docks and Granton Harbour has been diligently carried out throughout the year by the Port Sanitary Inspectors.

Tonnage.—The total number of vessels including steamers, motor vessels, sailing ships, and fishing craft arriving within the Port Sanitary District during the period under review was 9,824, representing a tonnage of 2,905,822, an increase of 506 vessels and 107,768 tons over last year.

Sanitary Improvements.—Over 6,000 nuisances were dealt with during the course of the year, comprising the destruction or cleansing of dirty beds and bedding, the cleansing of dirty bunks, floors, tables, lockers, the improvement of light and ventilation, the extermination of vermin, and the painting and cleansing of the interior surfaces of crews' quarters, living-rooms, and food-stores. Other matters which called for attention were the cleansing and repair of sanitary conveniences, the removal of garbage, the cleansing of drinking water tanks, the cleansing of store-rooms and bilge spaces and the painting of galleys and pantries.

Improvement of Crews' Quarters.—The construction of the crews' quarters in many vessels still leaves much to be desired, the facilities provided for washing and cleansing being very primitive, and most unsuitable for the conditions under which they are used. The provision of a suitable wash-place, and of clothes-lockers in or closely adjoining the stokehold or engine-room would do much to improve the firemen's quarters in many vessels.

The Masters of several vessels were induced to provide suitable large mirrors in the crews' quarters as an aid to the stimulation of pride and self-respect in personal appearance and hygiene. This innovation has proved of much interest and has been greatly appreciated. The further application of this principle by the provision of better furnishings and the regular supply of clean bedding would do much to enrich the appearance and remove the utter barrenness of these quarters.

Rat Repression.—The rat-guarding of ropes and hawsers to prevent the escape of rats ashore and the taking of rat-destructive measures on board were carried out on

most vessels, especially those coming from plague-infected ports. Eighty-one specimens of rats caught throughout the year were sent for bacteriological examination and in each case a negative result was obtained.

Vessels which came into the hands of ship-repairers for overhaul often presented difficulty in the destruction of rats, as the removal of ships' plates allowed an easy passage for rats into dry docks, thence to the quays and sheds. This occurrence was carefully watched for and in several instances the ship was fumigated before being taken over by the ship-repairers. It is interesting to note that as a result of the vigilant efforts of the Department and the Dock Authorities the number of rats caught in the sheds, quays, wharfs and warehouses throughout the Dock area during the year amounted to only 103 against over 600 during 1928.

International Sanitary Convention.—The coming into operation of the provisions of the International Sanitary Convention of Paris, 1926, regarding the systematic deratization of vessels should do much to reduce the rat population on board ships, applying as it does to vessels of almost all nations. The object of these provisions is, amongst other matters, to unify and standardise as far as practicable, the policies of the various countries in dealing with rat-infested vessels arriving from plague-infected and other foreign ports.

Prior to the operation of the 1926 Convention several countries demanded fumigation, or other rat-repressive measures, to be carried out irrespective of any action already taken in ports during the course of the voyage, with the result that many vessels were often subjected to a series of measures for an emergency which might be considered as having been adequately safe-guarded against.

The Convention, therefore, recommended that the vessels of the Signatory Powers to the Convention should carry an International Deratization or Exemption Certificate, valid for six months, showing the measures taken when necessary to destroy rats on board ship, and that such certificates should be accepted by the Signatory Powers unless the conditions indicated that the vessel had since been re-infested.

In terms of the Convention 123 vessels were dealt with, these either being granted a deratization certificate or an exemption certificate according to the conditions prevailing on board. Seven ships were fumigated for the American deratization certificate and 36 for the destruction of bed-bugs, while 31 were dealt with by powder for the destruction of cockroaches.

Dock Measures.—Periodical and systematic measures were taken by the Dock Commissioners for the destruction of rats ashore. Trapping and the laying of poison were found to be the most practical and effective means. In all 12,000 baits were laid. The total number of rats destroyed on ship and ashore was 1,174. No estimate is made of the numbers accounted for by poisoning as invariably the victims die in holes or runs.

A leaflet (printed in 4 languages) stating the facilities offered and the hours of admission to the Corporation V.D. Clinics, is left on board all vessels visited.

The Dock Commissioners maintain a high standard of cleanliness within the dock area, the roads, wharves, sheds, conveniences, etc., being regularly and systematically kept clean ; and the active measures taken in rat repression are much appreciated.

In the execution of the duties of Port Sanitary inspection much valuable assistance has been received from H.M. Collector of Customs, the Leith Dock Commissioners, the Granton Harbour Officials, and the various shipping companies and agents, for which my thanks and appreciation are tendered.

Form A.

Amount of Shipping Entering the Port Sanitary District during the Year 1929.

		Number.	Tonnage.	Numbers Inspected		Number reported to be defective.	Number of Notices issued.
				by the M.O.H.	by the Sanitary Inspector.		
Foreign	Steamers	1,522	1,392,439	97	638	17	7
	Motor	13	13,805	1	10	...	...
	Sailing	4	474	3	...	...	...
	Fishing	...	...	...	...	...	...
Total Foreign		1,539	1,406,718	101	648	17	7
Coastwise	Steamers	4,556	1,182,758	4	144	14	1
	Motor	25	28,310	...	5	...	...
	Sailing	86	5,751	...	...	...	...
	Fishing	3,618	282,285	...	300	...	...
Total Coastwise		8,285	1,499,104	4	449	14	1
Total Foreign and Coastwise		9,824	2,905,822	105	1,097	31	8

Form B.

Rats Destroyed in 1929.

Number of	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total in Year.
Black rats / Brown rats	108	24	78	28	191	120	172	112	49	163	9	120	1,174
Rats examined	7	...	1	4	8	4	6	6	2	16	1	26	81
Rats infected with plague	...	...	...	...	...	...	...	...	...	...	...	...	...
Rats not infected with plague	7	...	1	4	8	4	6	6	2	16	1	26	81

Form C.

PRECAUTIONS AGAINST PLAGUE.

Particulars relating to vessels Infected or Suspected or from infected Ports.

No. of Vessel.	Date of Arrival.	Whether Infected, Suspected, or from an Infected Port.	Method of Rat Destruction Employed.			No. of Rats killed.	Whether a Certificate of Deratization Issued.	Remarks.
			SO_2	H.C.N.	Poison Traps.			
1	Feb. 11	Bombay . . .	...	...	...	...	...	Fumigated last port.
2	,, 18	Bombay . . .	...	...	1	...	...	...
3	,, 19	Rangoon . . .	...	...	1	...	...	...
4	,, 20	Dakar . . .	...	1	...	9	1	...
5	Mar. 22	Bombay . . .	...	...	1	...	...	...
6	,, 28	River Plate Ports .	...	...	1	...	...	...
7	April 10	Calcutta . . .	...	...	1	...	...	...
8	,, 11	Rosario and La Plata	...	...	1	...	...	...
9	,, 17	Karachi . . .	...	...	1	...	...	...
10	,, 22	Rangoon . . .	...	...	1	3	...	...
11	May 20	Karachi and Bombay	...	...	1	...	...	...
12	,, 25	Singapore . .	...	...	1	...	...	...
13	,, 28	Rosario . . .	...	...	1	...	...	...
14	June 25	Rosario . . .	...	1	...	15	1	...
15	July 4	Rosario *via* Dakar .	...	1	...	16	1	...
16	,, 8	Karachi and Bombay	...	...	1	...	...	...
17	,, 12	Koh-chi Chang . .	...	1	...	50	1	...
18	,, 19	Bombay . . .	...	...	1	1	...	...
19	,, 31	Villa Constitution and Rosario . .	...	...	1	...	...	...
20	Aug. 2	Bombay . . .	...	...	1	...	...	...
21	,, 6	Calcutta . . .	...	1	...	34	1	...
22	Sept. 9	Rangoon . . .	...	...	1	1	...	...
23	,, 11	Capetown *via* Dakar .	...	...	1	...	...	...
24	,, 13	Singapore . .	...	...	1	...	...	...
25	Oct. 11	Bombay . . .	...	...	1	...	...	...
26	,, 14	Bombay . . .	...	...	1	1	...	...
27	,, 20	Bombay . . .	...	...	1	...	...	...
28	,, 26	Rosario and San Nicolas . .	...	1	...	22	1	...
29	Nov. 4	Buenos Aires . .	...	...	1	...	...	...
30	,, 9	Karachi and Bombay	...	...	1	...	...	...
31	,, 16	Calcutta . . .	...	1	...	17	1	...
32	,, 28	Karachi and Bombay	...	1	...	23	1	...
33	,, 30	Far Eastern Ports .	...	...	1	...	...	...
34	Dec. 2	Bombay . . .	...	1	...	13	1	...
35	,, 4	Rangoon . . .	...	...	1	...	...	...
36	,, 28	Marmagoa . .	...	...	1	...	...	...
			...	9	26	205	9	...

Form D.

Vessels other than those dealt with in Form C. subjected to measures of Rat Destruction.

No. of Vessels Fumigated by SO_2.	No. of Rats killed.	No. of Vessels Fumigated by H.C.N.	No. of Rats killed.	No. of Vessels on which trapping or poisoning were employed.	No. of Rats killed.	No. of Fumigation Certificates "Port 10 and 11."	Other Certificates.	Remarks.
...	...	94	853	7	13	103	18	Ropes and hawsers Rat-guarded.

Port Sanitary Inspection—Annual Statement.

Year 1929.

Ships boarded and inspected	1097
No. of re-visits made	987
No. of nuisances discovered	6,754
No. of nuisances abated	6,612
No. of communications written	17
No. of Notices served	116
No. of verbal warnings	715
No. of ships fumigated or otherwise treated for vermin by owners	179
No. of fumigation certificates granted	121
No. of ships fumigated for U.S.A. Certificate	7
No. of International Fumigation Certificates granted	103
No. of International Exemption Certificates granted	20
No. of Local Fumigation Certificates granted	17
No. of rats exterminated	1,174
No. of ships provided with rat guards	599
Notices of regulations served upon Masters or Officers in charge	533
V.D. Pamphlets distributed on behalf of the B.S.H. Council	498
No. of rats submitted for bacteriological examination	81
Negative	81

Nuisances Discovered.

Dirty floors, tables, decks, etc.	918
Dirty bunks and bedding	2,294
Dirty partitions and ceilings	654
Dirty lockers	780
Foul closets and latrines	361
Foul wash-basins	124
Foul sinks	29
Foul baths	7
Choked scuppers	68
Choked and defective latrines	38
Choked and defective wash-basins	29
Choked and defective sinks and baths	28
Obnoxious odours	13
Accumulations of garbage, refuse, etc.	139
Dirty fresh water tanks	90
Dirty and offensive bilges	542
Dirty galleys, food stores, pantries, etc.	85
Dirty wash places	70
Dampness in quarters	16
Insufficient light and ventilation	9
Ships without rat guards	161
Presence of rats and mice	107
Presence of cockroaches and beetles	62
Presence of bugs and fleas	106
Presence of flies	10
Miscellaneous	14
Total	6,754

STAFF.

I desire to express my cordial appreciation of the hearty co-operation and the enthusiastic services rendered by Mr Thomas Bishop, Depute Chief Inspector, and all the members of the Staff.

I am,

My Lord Provost and Gentlemen,

Your obedient Servant,

ALLAN W. RITCHIE, F.R.San.I., F.R.S.E.,
Chief Sanitary Inspector.

SANITARY IMPROVEMENTS IN 1929.

Nature of Nuisance.	Calton	Canongate	Newington	Morningside	Merchiston	Gorgie	Haymarket	St. Bernard's	Broughton	St. Stephen's	St. Andrew's	St. Giles	Dalry	George Square	St. Leonard's	Portobello	South Leith	North Leith	West Leith	Central Leith	Liberton	Colinton	Corstorphine and Cramond	Totals
Water-closets :—																								
Water-closets introduced	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	1	1	...	1	2	5	14
New apparatus substituted	2	1	1	3	13	6	...	1	1	7	4	10	7	8	20	5	3	5	3	1	...	...	...	101
Improved or repaired	10	59	5	3	4	...	...	4	8	9	16	62	19	37	57	11	15	29	6	13	...	...	1	368
Partitions of W.C. apartments repaired	...	...	...	...	...	...	...	...	...	...	1	1	...	2	...	...	...	...	...	...	...	...	...	4
Water-closets and sinks in a filthy condition and cleansed	1	4	...	2	...	...	...	...	...	...	1	1	1	6	3	...	4	...	...	...	...	...	...	23
Choked water-closets cleared	4	33	3	1	...	1	1	3	1	5	3	35	1	21	56	3	3	19	3	2	...	...	...	198
Water-closet apartments insufficiently lighted and ventilated—improvements effected	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	3
New water-closet apartments provided	...	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	2	...	6
Sinks, Tubs and Wash-hand Basins :—																								
Sinks introduced	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	5	7
Insanitary sinks abolished	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	2
Earthenware sinks and tubs substituted	6	6	1	1	3	8	2	3	3	5	7	14	33	7	17	2	...	3	2	4	...	...	...	127
Repaired (Woodwork, etc.)	12	13	5	3	9	9	...	4	11	9	6	21	41	16	25	8	5	19	9	16	1	...	1	243
Choked sinks, wash tubs, etc., cleared	1	24	2	1	1	2	...	2	1	2	2	13	1	7	13	...	2	3	1	...	...	...	...	78
Wash-hand basins renewed or introduced	...	...	...	...	...	1	...	...	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	4
Sinks removed to more sanitary situation	1	...	...	...	...	...	...	...	1	3	...	...	...	...	...	1	...	...	...	...	...	...	...	6
Drains :—																								
Choked drains cleared	25	39	14	24	15	78	6	12	17	23	32	69	47	72	138	21	31	58	7	27	3	...	4	762
Choked surface traps cleared	2	3	1	...	2	4	4	1	...	...	...	2	11	11	13	5	8	7	2	8	...	...	...	84
Drains repaired or renewed	4	2	1	...	14	...	...	...	1	1	...	2	2	1	4	4	4	3	1	...	...	2	...	46
Soil pipes repaired or renewed	6	8	4	10	5	12	...	...	2	5	5	12	4	9	24	2	2	4	...	9	...	1	...	124
Sinks, etc., waste pipes repaired or renewed	7	8	4	5	3	9	4	...	...	6	5	20	18	22	51	5	10	22	3	2	...	1	...	205
Rain-water conductors repaired or renewed	3	2	...	3	1	...	3	...	2	...	...	6	5	2	9	6	...	4	1	1	...	...	1	49
Water Supply :—																								
Cisterns found dirty	30	34	...	...	19	476	66	190	50	105	28	26	348	2	2	49	105	65	71	217	...	...	...	1,883
Cisterns found without covers	4	...	...	...	1	13	...	7	1	1	11	2	9	2	2	1	3	9	7	6	...	...	...	79
Cisterns repaired or renewed	1	2	...	...	1	...	2	1	3	2	3	5	5	3	5	6	8	15	1	12	...	...	...	75
Branches taken off the main	...	...	...	...	...	...	...	...	...	...	2	...	1	...	...	...	...	...	...	...	...	...	...	3
Water pipes repaired	11	25	5	1	2	1	2	2	2	4	7	34	5	19	53	2	9	21	2	1	...	...	1	209
Carry Forward	130	263	47	57	93	620	90	230	105	188	133	336	568	247	493	131	212	287	120	320	7	8	18	4,703

Nature of Nuisance.	Calton	Canongate	Newington	Morningside	Merchiston	Gorgie	Haymarket	St. Bernard's	Broughton	St. Stephen's	St. Andrew's	St. Giles	Dalry	George Square	St. Leonard's	Portobello	South Leith	North Leith	West Leith	Central Leith	Liberton	Colinton	Corstorphine and Cramond	Totals
Brought Forward	130	263	47	57	93	620	90	230	105	188	133	336	568	247	493	131	212	287	120	320	7	8	18	4,703
Water Supply (continued):—																								
Houses temporarily without water supply due to burst pipes, etc.	18	255	3	...	...	...	20	12	6	2	9	295	12	92	446	40	39	60	...	14	...	...	...	1,323
Repairs to Houses:—																								
Partition walls repaired	...	1	...	...	...	...	...	...	1	...	2	...	1	1	2	...	...	1	...	...	...	...	...	9
Floors, hearths, doors, etc., repaired	6	6	3	2	4	1	5	14	20	1	18	13	32	15	17	4	6	19	5	15	1	6	...	213
Windows and skylights repaired or renewed	7	12	6	7	4	3	...	8	11	5	9	22	26	14	15	14	11	17	6	16	...	16	6	235
Coal bunkers repaired or provided	...	...	...	...	...	...	...	...	4	...	...	4	3	3	14	...	...	2	1	3	...	1	...	35
Grates or ranges repaired or substituted	2	1	3	...	2	...	1	1	8	3	4	11	6	7	3	...	1	7	3	5	...	1	...	69
Wall and ceiling plaster repaired	6	11	9	5	4	7	3	3	23	2	9	38	25	30	40	4	6	27	8	9	1	1	...	271
Defective roofs repaired	1	1	...	...	...	...	3	1	3	2	1	3	3	2	...	...	6	7	2	1	1	2	2	41
Boiler of kitchen range renewed	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	3
Nuisances in Houses:—																								
Floors and bedding of houses in a dirty condition and cleansed by tenant	4	12	12	...	1	1	1	7	3	4	1	10	1	27	23	23	8	17	3	7	...	...	...	165
Nuisance due to bad smells in dwelling houses caused by escapes of gas, dead vermin, etc.	7	3	...	5	2	2	4	4	6	3	3	1	3	1	6	4	8	4	4	2	...	1	4	77
Smoke in houses due to foul or obstrueted vents	5	5	1	...	2	1	...	...	4	3	2	18	2	11	9	2	5	7	2	4	...	...	...	83
Damp houses remedied or abated	5	...	1	3	2	...	...	...	8	4	...	...	4	2	1	2	3	7	...	4	...	...	...	46
Damp and uninhabitable houses vacated	...	...	...	...	...	...	2	...	...	...	...	1	...	...	...	1	1	...	...	...	...	...	...	5
Houses overcrowded	37	101	20	5	5	8	8	19	19	43	47	219	43	90	217	39	56	116	48	48	3	...	2	1,193
Houses and shops flooded from defects on flats above	4	3	...	2	1	1	3	2	3	3	7	11	3	9	17	...	5	5	1	1	...	...	...	81
Animals kept in, or in close proximity to, dwellings	...	1	2	2	1	1	...	...	3	2	2	5	1	1	4	3	2	2	...	4	...	...	...	36
Houses distempered, papered or painted by—																								
Tenants	2	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	4	2	...	...	...	...	...	11
Owners	13	8	3	20	17	7	5	7	11	4	5	72	12	24	41	5	12	10	3	3	1	3	...	286
Carry Forward	247	683	110	108	139	652	145	308	238	269	252	1061	745	577	1348	273	385	598	206	456	14	39	32	8,885

SANITARY IMPROVEMENTS IN 1929—*continued.*

Nature of Nuisance.	Calton	Canongate	Newington	Morningside	Merchiston	Gorgie	Haymarket	St. Bernard's	Broughton	St. Stephen's	St. Andrew's	St. Giles	Dalry	George Square	St. Leonard's	Portobello	South Leith	North Leith	West Leith	Central Leith	Liberton	Colinton	Corstorphine and Cramond	Totals
Brought Forward . .	247	683	110	108	139	652	145	308	238	269	252	1061	745	577	1348	273	385	598	206	456	14	39	32	8,885
Stairs, Passages, etc.:—																								
Staircases painted	33	82	43	43	57	65	17	23	138	61	13	49	58	80	91	79	144	66	73	92	2	...	...	1,309
Stairs and passages in a dirty condition and cleansed by tenants	117	175	22	54	35	51	27	9	35	23	38	100	38	94	140	66	41	59	8	24	2	...	1	1,159
Persons committing nuisance in common stairs . .	...	...	...	...	...	...	1	...	...	...	2	...	2	1	...	...	...	4	...	...	...	...	...	10
Dogs and cats committing nuisance in common stairs and back-greens	18	3	2	5	6	17	1	3	12	9	8	3	10	4	7	...	2	3	1	3	1	...	2	120
Shops:—																								
Shops cleaned by tenants or owners	...	1	...	...	...	...	...	...	1	...	...	3	2	2	1	...	3	1	...	...	...	...	...	14
Schools:—																								
Wash-down water-closets substituted for trough closets .	...	...	...	6	51	...	...	28	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	85
General:—																								
Premises infested by rats	23	30	16	9	19	13	16	20	17	19	19	27	7	13	18	35	20	26	18	3	17	12	19	416
Premises infested by other vermin	9	8	12	1	1	7	...	2	6	5	3	30	6	13	26	14	5	15	...	8	1	2	1	175
Accumulations of rubbish, garbage, and filth removed from areas, roofs, cellars and vacant houses . .	51	118	13	27	24	34	13	10	45	34	29	92	51	54	188	28	310	332	33	304	1	2	3	1,796
Accumulation of manure near dwellings . . .	1	4	1	2	1	6	3	2	10	1	...	2	14	2	4	7	2	3	1	5	...	...	1	72
Disused cellars cleaned and closed	3	...	...	1	1	1	1	3	4	2	2	...	1	16	20	...	...	5	2	...	...	...	...	62
Tenants casting garbage over windows . . .	16	6	2	11	12	7	8	7	8	12	6	3	8	5	5	3	2	6	2	3	...	...	...	132
Surfacing of courts repaired or renewed . . .	...	...	...	...	...	1	...	...	...	...	...	...	2	...	1	1	7	1	...	1	...	...	...	14
Miscellaneous nuisances	7	3	1	6	7	10	12	10	14	13	3	5	15	8	12	12	9	26	7	4	3	8	7	202
Totals . . .	525	1113	222	273	353	864	244	425	528	448	375	1375	959	869	1861	518	930	1145	351	903	41	63	66	14,451

SUMMARY.

Number of complaints by citizens	2,693
,, ,, ,, other Departments	78
Number of nuisances discovered and reported by District Inspectors	10,321
Total number of nuisances dealt with by the Department	13,092
Of these have been abated	12,662
The remainder being in progress or under arrangement	430
Number of intimations of existence of nuisance served	1,521
,, notices to remove nuisances served at the instance of the Local Authority	44
,, notices delivered cautioning persons against casting garbage over windows	1,924
,, notices served on occupiers failing to take due rotation of stair sweeping and washing	675
,, notices served for the cleaning of dirty areas, cellars, etc.	100
,, notices and letters served for the whitewashing and cleansing of houses	214
,, notices and letters served for the removal of accumulation of manure	12
,, notices served in connection with defective drains and soil pipes	217

VETERINARY DEPARTMENT,
PUBLIC HEALTH CHAMBERS,
JOHNSTON TERRACE,
EDINBURGH, 30*th April* 1930.

To
The Lord Provost, Magistrates, and
Council of the City of Edinburgh.

MY LORD AND GENTLEMEN,

I beg to submit, for transmission to the Department of Health for Scotland, my Report for the year ending 31st December 1929, which has been called for by the Department in virtue of their powers under Section 4 (5) of the Milk and Dairies (Scotland) Act, 1914.

I am,

Your obedient Servant,

A. GOFTON,
Chief Veterinary Inspector.

To
The Secretary,
Department of Health for Scotland,
Edinburgh.

GENTLEMEN,

I beg to submit herewith my Report for the year 1929, as required by Section 4 (5) of the Milk and Dairies (Scotland) Act, 1914, and the Department's Circular Letter of 27th December 1929. An account of the year's work in connection with the inspection of meat and other foodstuffs, including port food inspection, is added.

MILK AND DAIRIES (SCOTLAND) ACT, 1914.

No administrative difficulties have been encountered during the year in the operation of the Act, and no points have arisen which merit special mention.

(a) Inspection of Cows and Dairy Byres.—In terms of the Act the Veterinary Inspector is required to inspect the cattle in all registered dairies in the City from time to time and once at least in each year. In accordance with practice the cattle in all the registered dairies in the City have been examined at intervals of one month. During the year 856 visits were made to registered dairies and the cattle therein inspected. In determining the duties of the Veterinary Inspector, under the Act, the Local Authority made provision for the periodical inspection of all dairy cattle in premises which were exempt from registration under the Act. In accordance with this requirement, 75 visits were made to non-registered dairies.

The newly-calved cows offered for sale in the market at Gorgie on the Tuesday and Wednesday of each week were subjected to inspection and examination in the market identical to that which takes place in registered dairy premises. During the year 2,936 cows were so examined in the market, representing an average of 56 cows exposed for sale each week. Three cows affected with tuberculosis of the udder, and four having a chronic cough and showing definite clinical symptoms of tuberculosis were ordered to be removed from the markets in terms of Article 12 of the Tuberculosis Order of 1925. One of these animals was returned to the place of origin, five were slaughtered by the owners at their own risk, and one was slaughtered under the Tuberculosis Order. In the case of the returned animal, the Local Authority concerned was informed so that the animal should come under their observation immediately on

arrival. Four cows suffering from emaciation attributable to causes other than tuberculosis, two suffering from Johne's Disease, and one affected with mastitis were discovered in the Markets and withdrawn from sale. The total number of animals thus dealt with in the markets was fourteen.

(b) Health of Cows, Etc.—Apart from tuberculosis, 118 diseased cows were detected in the course of inspections of cattle in registered or exempt premises. The diseases encountered were as follows :—

Suppurating conditions of udders and teats	8
Septic metritis	3
Psoroptic mange and ringworm	29
Johne's disease and emaciation	3
Mastitis	49
Retained placenta	2
General disorders	24

The cows in question were removed permanently or temporarily from the milking herds as cases required. The milk was withdrawn from sale in all cases in which risk was entailed of contamination or infection from the diseased condition. In appropriate cases it was fed to pigs or calves after boiling, otherwise it was destroyed.

(c) Tuberculosis in Dairy Cows.—During the year 12 cows on registered premises, which were found to be tuberculous within the meaning of the Tuberculosis Order were dealt with in terms of that Order. Five of these animals were affected with tuberculosis of the udder, two were the subjects of tuberculous emaciation and five had a chronic cough and were showing definite clinical evidence of tuberculosis. Tuberculosis of the udder was diagnosed by microscopical examination of the milk in three cases, in two, microscopical examination was negative and diagnosis was arrived at by means of the biological test. Two of the emaciated and clinical cases were diagnosed by microscopical examination of the sputum. In four animals, dependence was placed solely on the results of clinical examination, and in the remaining case the double-intradermal tuberculin test was applied to confirm diagnosis before ordering slaughter with its corollary in the shape of compensation to the owner.

In addition to the 12 animals referred to, 15 cows were proved to be affected with tuberculosis by the examination of pathological material obtained from them. These animals did not come within the scope of the Tuberculosis Order, but they were removed from the herds and sold for slaughter by the owners concerned. The total number of milk cows removed from registered herds and Gorgie Markets during the year, on account of tuberculosis, was thus 34.

The tuberculin test was not applied in any case under the powers contained in Section 22 of the Act. So far as that test was employed for the diagnosis of tuberculosis it was used under the powers contained in the Tuberculosis Order.

The incidence of tuberculosis in dairy cows in the City and district as revealed by post-mortem statistics at the abattoirs shows no material change as compared with former years. During the year 1,644 cows or 39·40 per cent. of the total number slaughtered in the City abattoirs were affected with tuberculosis in some degree. In 10·71 per cent. of these, the whole of the carcase and all the offal were condemned. The corresponding figure for the preceding year was 9·45 per cent. In 21·59 per cent. of the tuberculous cows the disease was moderately extensive in its distribution and in 69·70 per cent. it was limited in extent and more or less localised.

The tubercle-free herd maintained by the Royal Victoria Hospital Tuberculosis Trust at Gracemount Farm, continues to comply with the requirements of the Milk (Special Designations) Orders in respect of the health of the animals. The statutory tuberculin tests were applied twice during the year, on the first occasion to 45 animals, and on the second to 48. On both occasions all the animals passed the tests.

The Trust maintains a hill-grazing for the rearing of young stock and for pasturing cows resting prior to calving. The whole of the grazing stock was subjected to the double-intradermal tuberculin test in the spring and in the autumn. At the spring test 62 animals came under observation and at the autumn test 49. There was one doubtful reactor at the spring test. The animal concerned was sold.

(d) Repairs, Improvements, Etc., in Cowsheds.—In addition to the minor repairs necessary for general maintenance, special improvements were carried out during the year as follows :—

Roofs repaired and renewed	2
Increased ventilation and lighting	2
Grouting floors and around feeding troughs . .	4
General reconditioning of premises . . .	3

(e) General Sanitary Conditions Found.—Generally speaking, the dairy premises have been maintained in good sanitary condition. During the year, 24 notices were served requiring action in respect of the cleansing of persons, cleansing of cows, cleansing of premises, removal of horse dung from channels, and other similar faults.

(f) Number of Cowsheds.—At December 1929, there were on the register 88 premises in the occupation of milk producers. The number of cowsheds on these premises was 156, with a stall accommodation for 3,321 cows.

An application was received during the year for the registration as a dairy, under the Act, of premises used for the keeping of goats. The application was accompanied by an intimation that it was proposed to develop a business in the sale of goats' milk. It appeared to be doubtful whether the Milk and Dairies (Scotland) Act, 1914, contemplated the use of goats for the production and sale of milk, but the expression cattle, as used in the Act, includes goats. The Local Authority, after consideration of a report on the premises, granted a Certificate of Registration. It may be noted, however, that the proposal to develop a business in the sale of goats' milk has not been proceeded with.

Eight certificates of registration were cancelled during the year and, of these, one was revived on the application of a new tenant. Three new certificates of registration were granted. There was thus a net decrease in the City of 4 dairy premises in the occupation of milk producers.

At December 1929 the number of exempted premises was 31 and the number of cows therein 69. These premises are all licensed under the Cattle-sheds in Burghs (Scotland) Act, 1866. In only a few cases is milk sold from these premises. Exemption from registration under the Milk and Dairies (Scotland) Act, continued to be granted in those cases in which the amount of milk sold per day did not exceed two gallons.

(g) Milk and Dairies Order, 1925.—Articles 5 to 16 of the Milk and Dairies Order, 1925, have been complied with so far as these articles apply to the premises of milk producers in the City.

Milk and Dairies (Scotland) Act, 1914 (Section 18).—It will be observed from Mr Jowett's report that, during the year, 107 samples of milk, consigned to the City from the districts of other local authorities, were subjected to the biological test and that 4 of these proved to be tuberculous. In terms of Section 18 (2) of the Act, the dairy premises from which the affected milks had originated were visited and the cattle therein were examined jointly with the officers of the local authorities concerned. The investigations entailed five visits in the course of which 162 cows were inspected and subjected to clinical examination. In three cases, the animals responsible for the infection of the milk were located and they were slaughtered under the powers contained in the Tuberculosis Order. In the remaining case, clinical examination and submission of group samples to the biological test failed to disclose the presence of a cow eliminating tubercle bacilli in her milk at the time of examination.

It will be observed from Mr Jowett's report that during the three years 1927-28-29, the percentage of country milk samples demonstrated by means of the biological test to contain living tubercle bacilli has been below the average of the preceding years. These years coincide with the more effective and general applications of the Milk and Dairies (Scotland) Act, and the Tuberculosis Order. It is, perhaps, too early to assess the effect of these statutes in this particular respect, but the low percentage of infection discovered at least suggests that the fall is related to the extension of regular veterinary supervision of the health of dairy stock, resulting in detection of tuberculosis of the udder and of clinically tuberculous animals and the early removal of these animals from milking herds.

Milk and Dairies (Scotland) Act, 1914 (Sections 13, 14 and 21).—The City dairymen deserve the credit of making an honest endeavour to observe the terms of Sections 13 and 14 of the Act with regard to the withdrawal from sale of the milk from a diseased cow and notification of the existence of disease.

The City being entirely a receiving and consuming district no question of taking samples of milk under Section 21 of the Act has arisen.

Milk (Special Designations) Order (Scotland), 1923.—The producer's licence granted last year for the sale of Grade "A" milk has been continued. The conditions of the licence have been complied with. Seven samples of milk from this source were subjected to bacteriological examination during the year, and with one exception in the month of July, the counts showed less than 10,000 bacteria per c.c. Coliform organisms were present in 1/100th c.c. on one occasion.

There is one dairy in the City, belonging to the Royal Victoria Hospital Tuberculosis Trust, which is licensed for the production and sale of "Certified" milk. On an average the herd contains thirty-seven cows in milk and the estimated annual production is 25,550 gallons. The milk is retailed in the City by the producer, and, with the exception of the holiday months of August and September, the demand is generally in excess of the supply.

The herd was tested in the spring by the subcutaneous tuberculin test and in the autumn by the double intradermal test and there were no reactors. This herd and the herd belonging to Edinburgh Corporation at Colinton Mains Farm are the only tubercle-free herds in the City. Reference may, however, be made to the grazing farm belonging to the Royal Victoria Hospital Tuberculosis Trust at Romanno Bridge, Peeblesshire. The farm is used for grazing dry cows from the dairy farm belonging to the Trust at Gracemount, Edinburgh, and for rearing young cows for replenishments. Usually, there is a surplus stock of heifers available for sale as they approach calving. The stock at Romanno is tested with tuberculin at least once a year and there has never been a reactor on the farm. In October the number of dry cows and heifers tested was forty-nine.

All milks sold in the City under licences granted in terms of the Milk (Special Designations) Order, have been periodically sampled and subjected to bacteriological examination. During the year, one hundred and thirty-five samples of graded milk were thus examined. Of these, thirty-three were samples of "pasteurised" milk. Only a negligible proportion of the milk pasteurised in the City is sold under the designation "Pasteurised," and the thirty-three samples are representative of milk from both licensed and non-licensed pasteurisers. Further reference is made by Mr Jowett to these examinations in his report on the bacteriological work performed.

As a matter of interest in connection with the bacteriological examination of graded milks, it may be stated that the most common failure to maintain the bacteriological standard is in respect of coliform content. In order to remedy this fault attention is generally directed to methods of collection and to the sterilisation of milk vessels, etc.

In a recent case of constantly recurring coliform contamination, a careful detailed investigation was made and failed to reveal the source of infection during or after collection of the milk. The milk was then tested for coliform organisms first from groups of cows and then from individuals, with the result that the source of coliform organisms was brought home to two cows each of which was found to be constantly eliminating coliform bacilli in the milk from one quarter. It is well known that coliform organisms are occasionally associated with bovine mastitis and that they appear in some cases to be the cause of the condition. The animals in question, however, showed no clinical evidence of pathological change in the udder and, on careful manipulation, only a very slight and scarcely appreciable difference could be detected between the normal and affected quarters. The milk as drawn from the cows and after standing presented normal characters.

Milk Supply—City Hospitals.—Reference was made in my two last annual reports to the establishment, by the Corporation, of a tubercle-free herd for the supply of milk to the City Hospitals. At the end of the year purchases had been completed and the herd then comprised eighty-seven cows and thirty-five growing heifers of various ages. The average number of cows in milk during the year was seventy-four and the total output of milk 60,200 gallons. The supplies required by the hospitals fluctuate considerably but generally speaking the demand is highest in the winter months of December, January and February, and falls till the minimum is reached in June, July and August. As far as practicable, the times of cows calving are regulated to meet the fluctuations in demand.

The herd has been maintained in a tubercle-free condition. The whole of the stock was tested by the combined subcutaneous and ophthalmic tuberculin tests in the spring and by the double intradermal test in the autumn. At the latter test one cow gave a mild reaction which was confirmed on a check test against glycerine broth. She was slaughtered, but a careful detailed post-mortem examination failed to disclose any evidence of tuberculosis.

Official milk recording was commenced during the year. The records of thirty-three cows and ten heifers at first calf were completed, showing an average production per cow of 800 gallons and per heifer of 650 gallons. The overall average was 765 gallons at 3·79 per cent. butter fat. Three cows gave a yield exceeding 1,000 gallons, the highest yield being obtained from a cross Ayrshire cow with 1,225 gallons at 3·85 per cent. butter fat in 49 weeks.

The milk from the farm was repeatedly sampled during the year for bacteriological examination and was found to conform to the bacterial standard for " Certified " milk.

BACTERIOLOGICAL LABORATORY.

Summary, by Mr W. Jowett, F.R.C.V.S., D.V.H., of work performed in the Laboratory during 1929.

A.—BACTERIOLOGICAL EXAMINATION OF MILK.

Enumeration of Bacteria.—During the past year many samples of milk have been submitted to bacteriological examination for the purpose of ascertaining their respective hygienic standards, and there is no doubt that such tests serve as a useful index as to the amount of care and cleanliness which have been exercised in the production and handling of this food material.

The following is a summary of the various classes or "grades" of milk samples which have been submitted to bacteriological analysis during 1929 :—

"Certified" Milk	53
"Grade A" Milk (Tuberculin Tested)	34
"Grade A" Milk	15
"Pasteurised" Milk	33
Ordinary Market Milk	5
Milk for City Hospitals	6
	146

Of the above milk samples seven of the "Certified" and nine of the "Grade A" samples failed to conform to the required standard. Such lapses were, however, only temporary, subsequent "graded" milk samples proving, as a rule, when tested, quite satisfactory and "up to standard."

Of the "Pasteurised" milk samples tested, nine failed to conform to the required standard in so far as concerns the general enumeration of *living* bacteria present. When, however, the additional "Presumptive coli test" was applied to the pasteurised milk samples—and this test is applied as a routine test to all milk samples in this laboratory—it was found that living coliform organisms were present in at least sixteen of the pasteurised milk samples in the quantities tested, namely, one-tenth of a cubic centimetre—this being a high percentage.

In Edinburgh, "graded" and other milk samples have now been bacteriologically examined, as a matter of routine, for several years past, and the records clearly show that no undue hardship would be entailed on the producer if the standards for "graded" milk supplies were raised ; the standards at present in force erring, decidedly, in being too low. Judging from the available records, it is safe to say that any present producer of "Certified" milk to the Edinburgh area could easily conform to a standard of 10,000 organisms per cubic centimetre (instead of the present 30,000), together with freedom from coliform organisms 1/10th c.c.

Again, the present standard for "Grade A (Tuberculin Tested)" milk seems unduly low and could be fairly raised from the present requirement, namely, not exceeding 200,000 organisms per cubic centimetre (and freedom from coliform organisms in 1/100th c.c.) to a standard of say 50,000 organisms per c.c. and freedom from coliform organisms in 1/100th c.c.

With regard to *ordinary* market milk, at present, of course, no standard of cleanliness—in so far as concerns bacterial contamination—is laid down for this article of food. To the writer, it would seem a fair and reasonable requirement that *all* ungraded or ordinary milk sold for human food purposes should be required to conform to a definite standard of cleanliness and freedom from bacterial contamination. In a climate such as prevails locally it is reasonable to expect that any milk producer or dairyman using quite ordinary measures of cleanliness and reasonable care in handling, should be able to market a product containing less than 200,000 organisms per cubic centimetre—even during the warmer summer months—and with a coliform content similar to that at present in force for "Grade A" milk supplies.

B.—BACTERIOLOGICAL EXAMINATION OF MILK for the presence of Tubercle Bacilli and other Specific Organisms.

(1). Milk from Individual Cows (in City byres).

Number Examined.	Object.	Nature of Examination.	Result.
93	Detection of Tubercle Bacilli.	Microscopical	Positive . . 6 Negative . . 87

Of the 87 milk samples above shown as microscopically negative, streptococci were detected on microscopical examination alone in 17. Of the remainder, 8 were subsequently submitted to the biological test and 35 to cultural tests, with the following results :—

Number Examined.	Object.	Nature of Examination.	Result.
8	To determine the presence of Tubercle Bacilli	Biological	Positive . . 2 Negative . . 6
35	To determine the presence of other Specific Organisms	Cultural	Streptococci . 23 Staphylococci . 3 Mixed infection . 4 C. pyogenes . 2 Coli Type bacillus 3

2. Mixed or Bulk Milk Samples, collected at railway stations in Edinburgh.

Number Examined.	Object.	Nature of Examination.	Result.
107	To determine the presence of Tubercle Bacilli	Biological	Positive . . 4 Negative . . 103

The 4 positive tuberculous country milk samples were followed to their sources and samples obtained from individual animals or groups of animals on the respective farms for the purpose of bacteriological tests. Furthermore, as an additional safeguard, after removal of the tuberculous animals from the respective herds which had been supplying tuberculous milk, check samples were procured from bulk supplies and tested afresh biologically in order to verify the subsequent freedom of such milk from Tubercle bacilli.

C.—BACTERIOLOGICAL EXAMINATION OF OTHER MATERIALS FOR DIAGNOSIS.

Material.	Number Examined.	Nature of Examination.	Result.
Blood preparations	160	Microscopical and cultural (one or both)	*Anthrax*— Positive . . . . 1 Negative 159
Do.	136	Sero-Agglutination	B. Abortus infection— Positive . . . . 6 Doubtful . . . . 6 Negative 124
Skin scrapings	2	Microscopical	*Mange*— (Scheduled forms) Positive . . . . Negative . . . 2
Expectorate (cow's)	7	Microscopical	*Tuberculosis*— Positive . . . . 3 Negative 4
Diseased organs and materials	48	Microscopical, and in certain instances, Cultural and Biological in addition	Tuberculosis . . . . 8 B. Abortus infection . . 4 C. pyogenes infection . . 9 Other pyogenic infections . 14 B. Necrosis infection . . 2 Swine erysipelas . . . 1 Actinobacillosis . . . 3 Neoplasms . . . . 4 Pasteurellosis (rabbit) . . 1 Caseous lymphadenitis. (Imported mutton) . . 2
Other materials	4	Cultural and Biological	Suspected "Food poisoning" . 2 Defective or suspicious (adulterated food materials) . 2
Milk bottles	3	Cultural	Tests for sterility . . . 3

The foregoing Tables are self-explanatory. There are, however, one or two items of special interest. Firstly, the percentage of country milk samples (sampled on their arrival at the railway stations or elsewhere in Edinburgh) which on being submitted to the biological test were definitely proved to contain Tubercle bacilli. The percentage during the past year worked out, approximately at 3·7—this figure contrasting favourably with those of the immediately preceding years, which were as follows :—

1918	8·4	1924	14·0
1919	9·3	1925	8·1*
1920	9·9	1926	11·0
1921	11·6	1927	5·7
1922	2·0	1928	5·0
1923	5·2	1929	3·7

* Amended figure.

So that the average over a period of twelve years (1918 to 1929—both years inclusive) works out at 7·8 per cent. The figure for the year 1929 is therefore well below the average.

In addition to the above detailed investigations and examinations, vaccines (autogenous and stock) were prepared in the laboratory during the past year and were utilised in the treatment of cases of bovine mastitis.

With reference to the items included under the heading of " Diseased Organs and Materials examined " special attention has been directed to the examination of certain of the pyogenic infections encountered in sheep slaughtered in the local abattoir at Gorgie, mainly with the object of determining whether or not the disease " Caseous lymph-adenitis "—prevalent in certain meat exporting countries and met with occasionally in imported sheep carcases—occurred amongst locally slaughtered sheep. It is satisfactory to state that the disease mentioned has not been encountered in any sheep slaughtered locally.

A further item worthy of mention is that of swine erysipelas, since the instance here referred to was attended with transmission of the disease to a human subject. Such instances have, of course, been recorded elsewhere in the past. Although not of frequent occurrence, the effect of such transmission to a human subject appears somewhat alarming. Fortunately, however, as in this case, the disease in the human has proved non-fatal.

W. JOWETT, F.R.C.V.S., D.V.H.

SUMMARY OF WORK UNDER THE MILK AND DAIRIES (SCOTLAND) ACT, 1914.

Certificates of Registration :—			
Applications received			4
Certificates granted			4
,, ,, provisionally			0
,, refused			0
,, cancelled			8
,, in force at December 1929			88
Number of cows in registered dairies			3321
,, goats ,, ,,			18
,, visits to ,, ,,			856
,, ,, Gorgie Mart for newly calved cows			105
,, cows examined in Mart			2936
,, exempted dairies			31
,, cows in exempted dairies			69
,, visits to ,, ,,			75
Repairs and improvements effected :—			
General reconditioning of premises		3	
Roofs repaired and renewed		2	
Increased ventilation and lighting		2	
Grouting floors and around feeding troughs		4	
Minor repairs to walls, floors, etc.		20	
		—	31
Cows removed from dairy herds, and markets, under the Tuberculosis Order of 1925 :—			
Tuberculosis of the udder	8		
Tuberculous emaciation	2		
Chronic cough and definite clinical symptoms of tuberculosis	9		
	——	19	
Tuberculous cows removed by owners		15	
		—	34
Cows removed from dairy herds from other causes :—			
Temporarily		99	
Permanently		19	
		——	118
Diseased cows, other than tuberculous, detected in Mart for newly calved cows :—			
Mastitis		1	
Emaciation		4	
Johne's Disease		2	
		—	7
Notices served :—			
Requiring limewashing and cleansing of premises			245
Requiring removal of manure			11
Requiring cleaning of cows			7
Requiring personal cleanliness			1
Milk consigned from districts of other local authorities :—			
Number of samples submitted to biological test			107
Number found tuberculous			4
Number of visits to country dairies			5
Number of cows examined			162
Number of cows detected with tuberculosis of the udder			3
Bacterial Counts of ordinary market milk and milk for City Hospitals			11

MILK (SPECIAL DESIGNATIONS) ORDER (SCOTLAND) 1923.

Number of cows in licensed herds clinically examined	135
,, ,, ,, ,, removed temporarily	1
,, ,, ,, ,, ,, permanently	0

Records of tuberculin tests :—

	No. of Reactors.	No. Doubtful.	No. Negative.	Total.
Licensed Herd.				
Subcutaneous and Ophthalmic Tests	...	...	45	45
Double Intradermal Tests	...	...	48	48
Unlicensed Herds.				
Subcutaneous and Ophthalmic Tests	...	...	82	82
Double Intradermal Tests	1	1	240	242

Bacterial Counts of Graded Milk :—

"Certified" Milk	53	
"Grade A" ,, (Tuberculin Tested)	34	
"Grade A" ,,	15	
"Pasteurised" ,,	33	
	—	135

INSPECTION OF MEAT AND OTHER FOODS.

(a) Fat Stock Markets.—The usual observation has been maintained in the fat stock markets throughout the year, a Veterinary Officer being detailed for duty in the markets on each market day. Observation is maintained for the detection of sick and injured animals and for the prevention of cruelty. Under the Transit of Animals Order, power is conferred on a Veterinary Inspector of the Local Authority to prohibit the transport by road or rail of an animal which in his opinion cannot be conveyed without unnecessary suffering, and this power is exercised whenever occasion arises. As a rule the animals concerned are removed to the adjoining abattoir for slaughter at the owner's risk.

The following Table shows the number of animals exposed for sale in the fat stock markets during 1929 :—

Cattle	46,461
Calves	5,824
Sheep	231,449
Swine	21,479
	305,213

(b) Abattoirs.—Supervision has been maintained in accordance with the usual practice at the Gorgie and Leith Abattoirs. As compared with 1928, the total number of animals passing through the abattoirs shows a decrease of 17,643. This is accounted for largely by a drop of over 15,000 in the number of sheep slaughtered.

The number of animals passing through the slaughterhouses during 1929 are shown in the following Table :—

		Gorgie.		Leith.		Total.	
Cattle	Oxen	25,042		2,368		27,410	
	Bulls	586		157		743	
	Cows	3,413		760		4,173	
	Heifers	1,022		13		1,035	
			30,063		3,298		33,361
Calves		4,761		30		4,791	
Sheep		134,458		8,858		143,316	
Swine		14,234		1,352		15,586	
			183,516		13,538		197,054

(c) **Carcases and offal Condemned in Abattoirs.**—Carcases partially or wholly condemned in the City abattoirs weighed approximately 132·16 tons. To this there falls to be added 51·07 tons (weight estimated) of condemned offal, making a total of approximately 183·23 tons, an increase of 25·51 tons as compared with the preceding year. Tuberculosis was responsible for 57·30 per cent. of the carcase seizures and for 37·43 per cent. of the offal seized. Details of the seizures are shown in the following Tables :—

Number and weight of carcases in the different classes of animals condemned at abattoirs during 1929

	Totally condemned.		Partially condemned.		Total Weight in lb.
	No.	Weight in lb.	No.	Weight in lb.	
Oxen	64	39,358	218	30,696	70,054
Bulls	6	4,483	25	4,521	9,004
Cows	234	118,808	390	59,791	178,599
Heifers	13	4,656	16	1,917	6,573
Calves	39	2,679	8	132½	2,811½
Sheep	297	12,681	149	2,370	15,051
Swine	85	11,201	65	2,740	13,941
Total	738	193,866	871	102,167½	296,033½

Number of carcases condemned in the different classes of animals slaughtered in abattoirs during 1929, and causes of condemnation.

	Cattle.										Sheep.		Swine.		Totals.
	Oxen.		Bulls.		Cows.		Heifers.		Calves.						
	Total.	Partial.	Total.	Partial.	Total.	Partial.	Total.	Partial.	Total.	Partial.	Total.	Partial.	Total.	Partial.	
Tuberculosis	53	181	5	23	176	355	9	15	9	4	...	...	46	46	922
Œdema and Emaciation	1	...	...	1	10	...	...	...	5	...	137	88	5	...	247
Traumatism	...	5	...	...	2	19	1	...	1	3	8	16	1	8	64
Septic conditions	...	8	...	1	7	4	...	...	3	...	13	11	5	4	56
Pericarditis	2	...	...	...	...	...	2	...	...	...	...	...	...	...	4
Peritonitis	...	6	...	...	1	3	...	...	...	...	4	1	3	1	19
Pleurisy and Pneumonia	1	10	1	...	2	7	...	...	2	1	51	29	4	4	112
Dead, Moribund and Illbled	...	...	...	...	10	...	1	...	12	...	78	...	10	...	111
Jaundice	...	...	...	...	...	...	...	...	...	...	...	...	3	...	3
Neoplasms	...	...	...	...	...	1	...	1	...	...	4	4	1	1	12
Actinomycosis and Actinobacillosis	5	8	...	...	...	1	...	...	...	...	...	...	...	...	14
Melanosis	1	...	...	...	...	...	...	...	1	...	...	...	...	...	2
Swine Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	7	...	7
Mastitis	...	...	...	...	17	...	...	...	...	...	2	...	...	1	20
Immaturity	...	...	...	...	...	...	...	...	6	...	...	...	...	...	6
Metritis	...	...	...	...	7	...	...	...	...	...	...	...	...	...	7
Anthrax	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Johne's Disease	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2
	64	218	6	25	234	390	13	16	39	8	297	149	85	65	1,609

Comparison between tuberculous and non-tuberculous diseases as causes of condemnation in carcases of animals slaughtered in abattoirs during 1929.

		Cattle.						Sheep.	Swine.	Total.
		Oxen.	Bulls.	Cows.	Heifers.	Calves.	Total.			
Tuberculosis	Total	53	5	176	9	9	252	...	46	298
	Partial	181	23	355	15	4	578	...	46	624
Total and Partial		234	28	531	24	13	830	...	92	922
Non-Tuberculous Diseases	Total	11	1	58	4	30	104	297	39	440
	Partial	37	2	35	1	4	79	149	19	247
Total and Partial		48	3	93	5	34	183	446	58	687

Number of organs condemned in the different classes of animals at abattoirs during 929 (excluding organs of animals totally condemned).

	Cattle.						Swine.	Sheep.	Total.
	Oxen.	Bulls.	Cows.	Heifers.	Calves.	Total.			
Lungs :—									
Tuberculosis	624	94	1,313	48	26	2,105	175	...	2,280
Other Causes	179	10	51	1	2	243	18	81	342
Hearts :—									
Tuberculosis	1	...	...	...	...	1	...	...	1
Other Causes	13	...	1	...	...	14	...	2	16
Bowels :—									
Tuberculosis	317	27	557	20	3	924	66	...	990
Other Causes	10	1	12	...	1	24	1	1	26
Stomachs :—									
Tuberculosis	32	3	76	2	...	113	10	...	123
Other Causes	52	3	16	...	1	72	1	5	78
Spleens :—									
Tuberculosis	29	2	63	1	...	95	22	...	117
Other Causes	4	1	3	...	...	8	...	1	9
Livers :—									
Tuberculosis	243	21	215	15	13	507	146	...	653
Other Causes	7,976	216	1125	75	7	9,399	56	438	9,893
Kidneys :—									
Tuberculosis	52	1	57	5	...	115	...	...	115
Other Causes	18	2	17	...	...	37	3	1	41
Udders :—									
Tuberculosis	...	...	6	...	...	6	...	...	6
Other Causes	...	...	106	...	...	106	...	...	106
Heads :—									
Tuberculosis	711	87	533	45	3	1,379	699	...	2,078
Other Causes	109	1	13	2	...	125	1	...	126
Total	10,370	469	4,164	214	56	15,273	1,198	529	17,000

Percentage incidence of Tuberculosis in animals slaughtered at Abattoirs during 1929.

		Per cent.
Cattle	Oxen	4·09
	Bulls	19·78
	Cows	39·40
	Heifers	8·12
		8·98
Calves		0·71
Swine		4·90

(d) (1). Wholesale Dead Meat Markets.—During the year meat (fresh and frozen) estimated to be equivalent to 41,378 carcases was imported into the City for sale in the wholesale dead meat markets. In addition, considerable quantities of frozen boneless meat, kidneys, livers, tripe, etc., were received. It is not possible to ascertain with any approach to accuracy the amount of this class of material which arrives in the City. Daily visits of inspection were made to the dead meat markets and to the premises of wholesale meat traders.

A good deal of attention was directed during the year to carcases of imported mutton with a view to the detection of caseous lymphadenitis. In contrast with the experience in some towns in England (and particularly London) no case of caseous lymphadenitis was discovered in imported mutton arriving in the City. In a large percentage of the carcases it was found on examination that certain of the lymphatic glands had already been incised, presumably at the slaughterhouse of origin as a matter of routine inspection. In all cases the glands had been left *in situ*.

Chronic purulent conditions are often met with in locally slaughtered sheep, some of which present features bearing a resemblance to the lesions of caseous lymphadenitis. Over a period of years, a considerable number of these lesions have been subjected to bacteriological examination with the object of determining whether any of them were caused by the specific organism of caseous lymphadenitis. The results show that this organism was not present or responsible for any of the lesions.

Court proceedings were taken in respect of a cow carcase which was consigned to one of the Meat Markets from Berwickshire. The carcase was affected with widespread tuberculosis. The farmer and butcher concerned were summoned and, on their behalf, an agent tendered a plea of guilty in respect of the butcher. This plea was accepted by the Court and the charge against the farmer was withdrawn. A fine of £25 was imposed on the butcher.

(2). Retail Shops, Street Hawkers, etc.—Periodical visits were made during the year to shops, etc., in which foodstuffs are prepared or exposed for sale.

Number of visits paid to Shops, etc., during 1929.

Butchers' Shops	660
Provision Shops	687
Fishmongers' Shops	245
Fruiterers' Shops	365
Meat Sales and Wholesale Meat Shops	2,075
Live Stock Sales and Markets	260
Street Hawkers	28
Hide and Skin Merchants	726
Fish Markets	309
Restaurants	60
Railway Stations	2
Total	5,417

Inspectors are instructed in the course of these inspections to observe the sanitary conditions of food premises and whether they are maintained in a reasonable state of cleanliness. In particular, their attention is directed to back shops, cellars, pickling tubs, etc. As a rule faults are quickly remedied when the attention of the shopkeeper is directed to them, but, during the year, it was necessary to exercise a good deal of pressure in a number of cases in order to get cellars, used for the preparation of foodstuffs, satisfactorily cleansed and accumulations of waste materials removed therefrom.

In the butchers' shops observation is maintained in respect of the labelling of imported meat. It is found that warnings for failure to observe this requirement are frequently necessary. When these warnings fail to secure observance of the Sale of Food Order in respect of proper labelling, the matter is taken up with the Officer under

the Food and Drugs Acts, and a joint visit of inspection is made with a view to prosecution. Proceedings were taken against two butchers for breach of the Order. Convictions followed and a fine of £3 was imposed in each case.

Number and weights of foodstuffs seized in markets, shops, and other premises in the City, during 1929.

	No.	Weight in lbs.
Beef	57	32,872½
Mutton	78	3,933½
Pork	10	549½
Veal	18	491½
Poultry and Game	16	2,301
Edible Offal	9	534½
Fruit and Vegetables	10	2,167½
Provisions	5	120
Fish	10	3,163½
Total	213	46,133½

(3). **Carcases, etc., submitted for inspection** in terms of Article 7 (4) of the Public Health (Meat) Regulations (Scotland), 1924. This regulation places an obligation on the consignee of a carcase which he has reason to believe has not been inspected in the manner specified by the Public Health (Meat) Regulations, to report its receipt to the Local Authority of the district. In practice, the wholesale meat traders of the City notify the Veterinary Department in all cases in which they receive home-killed carcases from beyond the City boundaries. During the year notification was received in respect of 1,857 carcases and 87 parts of carcases. After inspection of these, 88 carcases, 11 parts of carcases, and 7 heads were seized and destroyed.

(4). **Approval of Meat Storage.**—Article 12 of the Public Health (Meat) Regulations (Scotland), 1924, requires persons selling meat from vans, carts, etc., who do not also keep an open shop for the sale of meat, to obtain from the Local Authority a certificate of approval of the accommodation provided for the storage of meat overnight. In the City only three traders fall into this category. The storage accommodation provided is in each case very satisfactory and the necessary certificates of approval have been granted by the Local Authority.

PORT FOOD INSPECTION.

The usual supervision has been maintained as to the condition and soundness of foodstuffs landed at the Port of Leith during 1929. No feature of outstanding interest has arisen.

The appended summary will serve to show the origin and the kinds of foodstuffs falling under the supervision of the Department at the Port of Leith.

Imported Foodstuffs inspected, under the Public Health (Oversea Meat) Regulations (Scotland), 1925, and the Public Health (Unsound Food) Regulations (Scotland) 1925, during 1929.

Country of Origin.	Foodstuffs.	No. of Consignments.
Holland	Bacon	215
	Canned Mince	1
	Canned Veal	44
	Fruit	490
	Gut	2
	Lard	1
	Oysters	2
	Pigs' Heads	1
	Pigs' Feet	10
	Provisions	1,398
	Vegetables	736
	Yeast	103
	Carry forward	3,003

Imported Foodstuffs inspected, under the Public Health (Oversea Meat) Regulations (Scotland), 1925, and the Public Health (Unsound Food) Regulations (Scotland) 1925, during 1929 (*continued*).

Country of Origin.	Foodstuffs.	No. of Consignments.	
	Brought forward		3,003
Denmark	Bacon	104	
	Canned Meat	51	
	Fish	5	
	Fruit	3	
	Gut	3	
	Hams	21	
	Lard	66	
	Pigs' Feet	45	
	Pigs' Heads	85	
	Provisions	408	
	Sausages	4	
	Yeast	51	
		—	846
U.S.A.	Cereals	61	
	Fruit	9	
	Hams	9	
	Lard	10	
	Lunch Tongues	10	
	Pork and Beans	5	
	Provisions	10	
		—	114
Canada	Canned Meats	2	
	Cereals	55	
	Hams	14	
	Lard	18	
	Lunch Tongues	14	
	Canned Mince	2	
	Provisions	20	
	Pork and Beans	3	
		—	128
Iceland	Fish (fresh)	13	
	Fish (salted)	60	
		—	73
Belgium	Fruit	94	
	Provisions	101	
	Vegetables	2	
	Yeast	50	
		—	247
Germany	Fruit	69	
	Provisions	135	
	Cereals	1	
		—	205
Russia	Provisions		8
South America	Cereals		7
Greece	Fruit		2
Rumania	Cereals		3
			4,634

Imported Foodstuffs condemned or rejected and re-exported at the Port of Leith, during 1929.

	Weight in lb.	Weight in lb.
Fruit :—		
Black Currants	425	
Dried Currants	11,200	
Oranges	900	
Pears	3,600	
Plums	1,040	
	——	17,165
Vegetables :—		
Carrots	171,050	
Lettuce	120	
Onions	120,490	
Turnips	20,280	
	——	311,940
Condensed Milk		168
Pigs' Heads		168
Sugar		2,016
		331,457

	Tons	Cwts.	Lbs.
Equal to	147	19	49

Summary showing total diseased and unsound Foodstuffs dealt with by the Department in the City during 1929.

	Wt. in lbs.
At Abattoirs—Carcases	296,033½
Offal (weight estimated)	114,390
In Shops, Warehouses, etc.	46,133½
At the Port of Leith	331,457
	788,014

	Tons	Cwts.	Lbs.
Equal to	351	15	94

LIGHTING AND CLEANSING DEPARTMENT STUD.

Six hundred and forty-six visits of attendance were made to the stud under the control of the Lighting and Cleansing Department, and 21 horses were subjected to inspection and examination prior to consideration of purchase by the Lighting and Cleansing Committee.

COLINTON MAINS AND OXGANGS FARMS.

General supervision has been maintained over the dairy herd and farm stock, and the Staff of the Department have co-operated with the Farm Manager on matters relating to the purchase, management and feeding of the stock. One hundred and eighty visits were paid to the farms for the treatment of sick and parturient animals.

STAFF.

I desire to take this opportunity to express my thanks to the Staff of the Department and my appreciation of the efficient manner in which they have carried out their duties throughout the year.

I am,

Gentlemen,

Your obedient Servant,

A. GOFTON, F.R.C.V.S.,
Chief Veterinary Inspector.